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Wonderland '96

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PICTURING

THE COUNTRY
THE CITIES
THE RESORTS
THE GAME

FOUND ALONG THE

Northern Pacific Railroad

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Wonderland '96.

A TRANSCONTINENTAL TRAIN.

THERE has started, at 4.15 P. M. every day for many years, from the Union Station at St. Paul, Minn., on the long journey to the Pacific Coast, the transcontinental train of the Northern Pacific Railroad.

As it stands in the station waiting the hour of departure it well merits inspection. At its head is a huge ten-wheeled Baldwin locomotive. On each side of this machine there are three driving-wheels sixty-two inches in diameter. The ordinary or standard locomotive has but two driving-wheels at each side. This number does not give enough grip on the rails to enable the engine to pull the heavy train easily and rapidly around curves and over heavy grades. An extra pair of driving-wheels is therefore necessary.

As the great machine stands, its length from peak of pilot, or in common parlance, cowcatcher, to end of tender is about fifty-five feet. From the rails to top of smoke-stack it stands fourteen feet five inches. With its tender loaded with coal and water it weighs nearly ninety-four tons, or 187,980 pounds. As it rests on the track, all ready to exert its tremendous powers at the simple opening of a valve, it appears an almost inert mass of brass, iron, and steel; of rods and wheels, and cylinders large and small; as lifeless and harmless and powerless as a dead leviathan might be. But within it are even now the powers of the volcano. The fires are burning, the water is boiling, the pent steam is crowding and pressing. It chafes at its confinement. Open! open! it cries with sibilant hiss to the throttle as the time for the exercise of its energy arrives.

O! thou mighty monster — wonderful example of the ingenuity, the Godlike, in man! Always before us, yet always compelling our wonder, always hushing us to awe by thy silent power. A very Euroclydon in thy

swiftness, a very Vesuvius in thy unbridled passions. Possess thy hissing soul with patience. Soon, soon indeed, shall thy power be put to the test.

Behind this noble combination of iron, brass and steel, extends a long train. Depending upon the time of the year and the pressure of travel, yea, even upon the day in the week, the number of cars varies from ten to fifteen. First comes the mail car in which Uncle Sam's messengers run a traveling post office. Then follows the express car, carefully guarded by ever-vigilant expressmen. The third car is the principality of the baggage man, and a mighty man is he. Then follow the various classes of passenger coaches; the free colonist sleeping car, where man or woman may find a fair bed at night and a comfortable seat by day, without extra charge, furnishing, however, their own bedding. The smoking car, and first-class coaches with their high-backed, easy, reclining seats, are succeeded by the Pullman tourist car. This car is a sleeping car, wherein the fare charged is less than one-half that of the regular first-class Pullman sleeping car. It is plainly finished in natural woods, simply upholstered in leather, with a uniformed Pullman colored porter in attendance. Both the tourist and colonist sleeping cars have ranges where the passengers can cook meals, heat water, coffee, tea, etc. The tourist car is supplied with beds and bedding the same as the first-class Pullman sleeping car. Behind the tourist car is the dining car, which is a feature of this train. It is not a buffet car, where one obtains refreshments simply, but a regular dining car, serving meals every day at stated hours, at the uniform price of 75 cents per meal. Whether it rains or shines, is winter or summer, the train on time or delayed, as will of course sometimes happen, the traveler is sure of his meals at regular hours.

Behind the dining car are the first-class Pullman sleeping cars — from two to four of them. These are of the most approved type, with heavy trucks, and wheels of large diameter, insuring smoothness of motion. This entire train is vestibuled, and the car-wheels are of paper and steel tired — the best wheel in use. All the cars are painted the dark color of the Pullman cars, and as it stands ready to start it is a train imposing and dignified in appearance, and you do not wonder that the officials are proud of it.

But the bell of that monster engine is ringing, the conductor is signaling to start. Jump aboard and we will continue our dissertation as we glide swiftly along.

The ordinary traveler, especially if gifted with moderate powers of observation, usually notices the characteristics of the train upon which he rides. Unless, however, he has done much traveling upon Western railroads he will have no opportunity to inspect such a train as this. The train of the East is usually not more than one-half as long, and its com-

ponent parts very different. This train is emphatically a cosmopolitan train. It necessarily must be. A complete census of its occupants would produce some interesting and, in cases, amusing statistics.

Did it ever strike you that a train such as this is almost a little world by itself — a part of humanity caged in, as it were, and almost aloof from the great world about it? Such it practically is, and in this light most of the throng aboard regard it, and immediately set about making their little world as comfortable and world-like as possible.

The history and management of such a train is interesting. How many of those into whose hands this brochure may fall have any idea of how a train starting on a 2,000-mile journey is handled?

Let us study it awhile. The locomotive was made in Philadelphia, Penn. The cars were built at Pullman, Ill. Reckoning the train at twelve cars, its combined weight would be:

One locomotive and tender	187,980 lbs.
Three mail, express, and baggage cars	182,300 lbs.
Two day coaches	129,800 lbs.
Two tourist and colonist sleeping cars	127,300 lbs.
One dining car	90,110 lbs.
Four Pullman first-class sleeping cars	393,240 lbs.
Total	1,110,730 lbs.

Or more than 555 tons, and its length is 829 feet 9 inches.

The distance from St. Paul to Portland is 2,056 miles, which is traversed in 78.05 hours, an average of about twenty-seven miles an hour, schedule speed, including all *regular* stops. Of these there are 210, including ninety-three where trains stop on signal only. These stops necessarily increase the speed of the train running between stations, making it about forty-five miles per hour, on an average. Of course, on heavy up-grades, over the mountains and at other points, the speed is much less than on a level, while on down-grades it is greater, frequently being from fifty to sixty miles per hour.

How many men and engines do you imagine it requires to handle this train between terminal stations?

The road between St. Paul and Portland is divided into eight divisions; each with its division superintendent, train dispatcher, and their corps of assistants. These divisions are as follows:

Minnesota division — St. Paul–Fargo	251 miles.
Dakota division — Fargo–Mandan	199 miles.
Missouri division — Mandan–Glendive	216 miles.
Yellowstone division — Glendive–Billings	226 miles.
Montana division — Billings–Helena	238 miles.
Rocky Mountain division — Helena–Hope	298 miles.
Idaho division — Hope–Ellensburg	357 miles.
Pacific division — Ellensburg–Portland	271 miles.

Over each division the train is handled by a separate operating crew, consisting of a conductor and two brakemen. The dining-car force go with the train from St. Paul to Portland, as does the car. The same is true of the Pullman conductor and porters. The baggage men are changed three times between terminal stations, the express messengers four times, and the mail agents four times. Most interesting of all are the changes of locomotives and their engineers and firemen. To haul this train between the terminal points — the Mississippi River to the Columbia and Willamette rivers — requires no less than seventeen different engines and thirty-four engineers and firemen, exclusive of those used to help the train over the mountains, etc., when it becomes a double-header. These engines are not all of the same type nor weight. The character of the locomotive is determined by the character of service it has to perform. As the time schedule is faster or slower, as the grades, etc., vary, so do the engines. A tabulated statement on this head that may prove interesting, is appended herewith:

SERVICE TABLE OF LOCOMOTIVES HAULING N. P. TRANSCONTINENTAL TRAIN.

No.	From.	To.	Schedule Speed.	Miles Run.	Character of Country.	Grades, Curves, etc.
			Mls.			
1	St. Paul	Staples	30	142	Mississippi Valley	Easy grades.
2	Staples	Fargo		109	Lake Park Region, Red River Valley	Curves; easy grades
3	Fargo	Jamestown	28	92	Red River Valley, No. Dakota prairies	Easy grades.
4	Jamestown	Mandan		107	Prairies	Easy grades.
5	Mandan	Dickinson		110	Heart River Valley	Curves; easy grades
6	Dickinson	Glendive		106	Bad Lands Country	" heavy grades
7	Glendive	Forsythe	30	124	Yellowstone Valley	Easy grades.
8	Forsythe	Billings		102	Yellowstone Valley	Easy grades.
9	Billings	Livingston	26	115	Yellowstone Valley	Easy grades.
10	Livingston	Helena		123	Rocky Mountains	Very heavy grades.
11	Helena	Missoula	27	125	Rocky Mountains	Very heavy grades.
12	Missoula	Hope		173	Rocky Mountains and Clark Fork Valley	Curves; very heavy, then mod'te grades.
13	Hope	Sprague	29	126	Plains Country	Easy grades.
14	Sprague	Pasco		104	Plains Country	Moderate grades.
15	Pasco	Ellensburg		127	Yakima Valley	Moderate grades.
16	Ellensburg	Tacoma		127	Cascade Range	Very heavy grades.
17	Tacoma	Portland	24	144	Columbia and Willamette Valleys	Moderate grades.

It will be seen that, in a general way, the engine service is not far from 100 miles per trip. The average is about 121 miles. This unit of service is determined by various reasons. Convenience in locating roundhouses — where the engines are housed when *resting* — and quality of the water obtainable for use in boilers, etc., are some of the factors in the problem.

N.P.R.R.

As each locomotive reaches the end of its run it is at once detached, placed in its stall in the roundhouse and taken in charge by the men there. The steam is blown off, the engine cleaned and carefully examined, nuts and bolts tightened, and minor repairs made. Here the machine has a rest of about eight or ten hours, on an average, before starting on its return trip with the eastbound train.

At points where locomotives are changed, the train stops five or ten minutes. A gang of men examines the wheels and trucks of the train, oils the journals, replenishes the ice and water reservoirs in the cars, and, if there are hot boxes, replaces the heated bearings with new ones.

These men are not counted in reckoning the number connected with the train from St. Paul to Portland.

Recapitulating the trainmen we find that there are:

Engineers and firemen — regular — 17 crews, 2 each	34
Engineers and firemen — helpers — 4 crews, 2 each	8
Conductors and brakemen — 8 crews, 3 each	24
Mail agents — 5 crews and helpers	9
Express messengers — 4 crews and helpers	7
Baggage men — 4 crews, 2 each	8
Dining-car staff	7
Pullman cars' staff	6
Ticket collectors and exchangers	2
Total	105

From this brief account the reader may, perhaps, obtain something of an idea of the detail and minutiæ necessary in operating a transcontinental railroad train. This, however, but hints at the actual labor and care involved.

THE NORTHERN PACIFIC COUNTRY.

IN THE Southern, Middle, and Eastern United States railroad construction followed after the settlement of the country. In the Western States and Territories this condition of affairs was largely reversed. The railroad was compelled to become the pioneer. Denizens of old, settled communities, owners of small farms in the East, could not be persuaded to venture into a region remote from civilization. A land without telegraph lines, mail facilities or rail communication with those whom they left behind, savored too much of being literally buried alive to attract them. Perforce, therefore, the railroad must open an iron pathway into the unknown. It did it. It discounted the future. It discounted it largely, too largely in many cases. It bridged rivers, crossed Indian hunting grounds, cut through hills, traversed buffalo plains, tunneled mountains, opened fertile valleys, believing that the people of the more crowded communities would settle the new land and afford a business for it that would allow it to live and prosper. To a greater or less extent this has happened.

The Northern Pacific Railroad has, perhaps, less to complain of in this respect than any other prominent Western railroad. This was to be expected. The land it traverses is a royal empire — an empire of wonderful possibilities. No other transcontinental road will compare with it in the variety and richness of the region tributary to it. This applies equally to its scenic features, its agriculture, mineral deposits, pastoral lands, its timber preserves. Let us take a bird's-eye view of this 2,000 miles of country.

The original charter of the Northern Pacific contemplated its construction from the head of Lake Superior westward. It thus happens that the main line has two eastern stems — one from Staples through Brainerd to Duluth, with an extension through West Superior to Ashland, Wis.; another from Staples through Little Falls to St. Paul, at the head of navigation on the Mississippi River.

WISCONSIN.

There are seventy-two miles of Northern Pacific Railroad in Wisconsin. For the most part the country is a timber region. Millions and millions

of feet of timber of the coniferous species, and much hardwood timber, have been shipped to all parts of the country. As the land is cleared it is devoted to agricultural purposes.

A good quality of brown sandstone is found near the shore of Lake Superior.

The region is wild and picturesque, and affords splendid trout-fishing in its streams. The Brule River is specially noted in this respect.

MINNESOTA.

Between Duluth and Staples the country is largely a timbered region. There are many open spots interspersed among the trees. From an agricultural standpoint the country varies. There are some sections where the land is exceptionally fine, others are not so good. The better localities are rapidly being taken up by market gardeners. Small fruits and vegetables grow unusually well, and Duluth on one side and St. Paul and Minneapolis on the other afford excellent markets. This section is part of an ancient glacial region, and is therefore inviting in its topography. Many beautiful lakes are hemmed about by the forest; low and graceful hills abound, affording beautiful home sites by the lake sides. Fishing and hunting are good, the climate a pleasant one, so that there is much to attract the lover of nature.

Situated in the heart of this wooded and lake-dappled region is Deerwood. Within convenient distance of Duluth and the Superiors, it affords a beautiful retreat for those anxious to escape the city and its lake winds during the summer months. A little hamlet among the woods, its life is largely that of the summer. Wild flowers and tangled vines, rich meadow lands, wild berries, wooded hills amid which, drowsy lakes shimmer, their surfaces often flecked with lily gardens; cosy nooks and cool glens, make an attractive pleasuring ground. Hotel accommodations are fair, while many fine cottages and rural homes, peopled by refined and cordial cottagers, welcome the tourist to their hospitalities.

From St. Paul to Little Falls the railroad follows the Mississippi Valley. This is a farming region. Crossing the river at Little Falls the road sweeps through the timber region to Staples, where a junction with the Duluth line is effected. From Staples west the road traverses the finest part of Minnesota, the noted Lake Park Region. Here again is a glacial country. In a land such as this, one wonders at what is possible in nature. In an agricultural way, it is very rich. Farming, stock raising, dairying are all carried on with profit. The horses and cattle that are raised, and the butter made, throughout the Park Region would take premiums at any State Fair. The rolling character of the land insures good drainage and picturesque farms. The hills are clothed with hardwood timber,

affording an abundance of fuel. It is an ideal farming country. In summer this region is resplendent in scenic beauty.

The Park Region extends over many counties, and contains within it thousands of lakes. As may well be expected, such a region is bound to become the resort of outdoor pleasure-seekers in summer. There are many places where humanity seeks to escape from the noise and turmoil of the city. Detroit is the most important of these. It is 204 miles from St. Paul, 47 miles east of Fargo, and 117 miles from Grand Forks, on the main line. Detroit Lake, a fine body of water, is one of a string of a dozen or more lakes extending southward. These are nearly all connected by a river navigable for rowboats, with the exception of one or two light portages. From Detroit a small steamer navigates several of these lakes, and it is proposed, in time, to extend the present tour over many more. These lakes are utterly unlike, are all of great beauty, and a canoe trip among them is a delightful recreation. At Detroit good hotel accommodations can be secured, and also at Lakes Salle and Melissa, reached daily by steamer. Lake Park, thirteen miles west of Detroit, is another beauty spot of this region. Near at hand are one or two small lakes, and six miles south is Cormorant Lake, a large lake, where bass, pike, pickerel, etc., are caught in quantity. Good hotel accommodations are also obtainable here, at reasonable rates. The table is specially to be commended.

At Perham, east of Detroit, are many lakes that afford fine sport to the angler. Farm-house board can be obtained at the best of these lakes, which are several miles south and west of the town itself.

A branch line extends southwest from Wadena on the main line, that reaches Battle Lake, Clitheral Lake, and others. Summer hotels are found at these points that will satisfy the reasonable traveler. Battle Lake is the central one of a number of charming lakes, in a most interesting locality.

NORTH DAKOTA.

Although one of the youngest of the sisterhood of States, it is a very important one. Eliminate North Dakota from the map and earth, and a very serious recasting of agricultural domain and financial affairs would ensue. They will never grow bananas, pineapples, nor oranges — until recently, at least, quasi luxuries — in North Dakota. Every man, woman, and child in the universe feels that a loaf of bread is his or her due at all times, and the bread made from North Dakota wheat is universally acknowledged to be just a little better than that made from wheat raised anywhere else in the wide, wide world.

North Dakota is a magnificent domain. The Red River of the North traverses it from south to north its entire length. Farther west the

James River flows from north to south, in a fertile valley of the same name. Then come the rolling plains — vast stretches of breezy, billowy prairie, forming at the same time a fine landscape and illimitable grazing grounds. And the flocks and herds are being put there to graze them. In the years to come, the beef and mutton and wool raised on these now treeless steppes, will be sought after by the epicureans and wool-carders of the cities, to the exclusion of that from southern latitudes.

One of the principal physical features of North Dakota is the Missouri River. In olden time it was an important line of communication with the more remote Northwest. Railroads have changed all that. Along its banks were many army posts where the blue-coated soldier watched over the crafty Indian. These, too, are gone and going. The Northern Pacific Railroad passes within five miles and in plain sight of one, once all important, now abandoned. The low, white buildings seen to the southward as the train passes from Bismarck to Mandan, are all that remain of old Fort Abraham Lincoln, historic as the home of the Custer's and the Seventh Cavalry prior to that fateful fight with the Sioux in 1876. West of Mandan the railroad follows the Heart River Valley, a beautiful region and a favorite hunting ground of the officers of the Seventh when Lincoln was their headquarters.

Still westward and a land of dreams, visions, lies before us. What is it, whence came it, what means it? Ah! well may one ask. In all the vastness of the land there is none other like it. It breaks upon us as a figment of the imagination. It holds us, as the ancient mariner held the wedding guest, spellbound.

Pyramid Park — *Mauvaises Terres pour traverser* is what it is called. Ever since the days of the French voyageurs, who penetrated and named it, it has been described by tongue and pen. No description ever did justice to it — none ever will. It is indeed *sui generis*.

Through the midst of this glaring land flows the Little Missouri River, and Medora is its metropolis.

As the train, after leaving Dickinson, descends the grade into this maze of hills and buttes, the passenger, if wise, will perch himself on the rear platform. Between Sully Springs and Medora he will see huge, white chunks of petrified trees. Near the latter place, on the left side of the track going westward, Watch Dog Rock can be seen. All through the hills are uniquely formed rocks, to which characteristic names have been given. Much will be seen from the train, but what can not be seen are the fine ranches. These lie back from the railroad, along the timbered streams. The grass found here is of superb quality, and with the ravines and bluffs, that afford protection from wintry storms, cause this to be a stock-growing region unsurpassed.

MONTANA.

From Medora the road ascends until the higher plains between the Little Missouri and the Yellowstone rivers are reached. It then winds its way to Glendive on the Yellowstone, near the mouth of Glendive Creek.

The original conception in the building of the Northern Pacific, contemplated using the Missouri River Valley from the Rocky Mountains eastward. For what were considered strong reasons this route was abandoned and that of the Yellowstone River substituted. It thus happens that for 341 miles — Glendive to Livingston — the railroad follows this stream. For nearly the entire distance the bluish-green waters of the river itself are in view. Then come the mountains, the great Rockies — great wherever they are seen — the gigantic vertebræ of a tremendous continent. Three times they oppose themselves to the effort to penetrate beyond them; three times the cunning brain and indomitable will of American engineers vanquishes them. The range is first crossed between Livingston and Bozeman; again, beyond Helena; the third time west of Missoula. The altitudes are as follows:

Bozeman Tunnel,	3,706	feet	long,	5,565	feet	above	the sea.
Mullan "	3,873	"	"	5,548	"	"	"
Coriacan Defile Pass, - -	3,946	"	"	"			

Beyond Missoula, after the road has worked safely through the Coriacan Defile in the Mission Range, a spur of the Rockies, another range, the Bitter Root, rises before it. This is headed off, the road swinging to the north and passing around it at Lake Pend d'Oreille, just across the Idaho line.

The scenic attractions along the railroad in Montana are varied. East of Glendive the so-called "Bad Lands" cliffs will be seen at intervals, and near the town itself they reappear in striking boldness *sans* the vivid colors found in Pyramid Park. Many flat-topped buttes are also seen. A source of divertisement to the tourist soon after leaving Medora is the number of prairie-dog villages seen upon each side of the track.

The valley of the Yellowstone is one of the largest and finest in the West. I have never passed through this stretch of 341 miles when it did not strongly impress me. The river is always bowling along; the ranches with their low, log houses always bespeak warmth, comfort, and seeming prosperity; the cliffs and palisades are ever grim and gray, high and adamantine, whether in storm or sunshine; the view of the Crazy Mountains from the upper valley is always a grand one, and the immense possibilities of the region always suggest themselves.

The crossing of a mountain range while in a train is always interesting. An additional locomotive is necessary. One of those huge, powerful machines, built, not to rush along at sixty miles an hour when neces-

sary, but to pull enormous loads. On the curves the two locomotives can often be seen through the windows of the coaches, as they slowly climb skyward. 'Tis interesting to study the mountains as the train changes position. Now some high peak is directly ahead; soon it is far to the rear. A great granite monument not made by man's hands is seen off at one side; in a few moments it looms up at the other side. A water-tank seen at one time far above us is ere long just as far below us. It all comes simply from the ever-changing position of the train as it slowly draws nearer the sky-line, taking advantage of the topography to reach the pass in the easiest manner possible.

Beyond the Bozeman Tunnel comes the fertile Gallatin Valley. This is a large, level valley hemmed in on all sides by mountains. The Gallatin has always been the pride of Montana. The wide grain fields seen in this valley are a positive astonishment to the Easterner who expects to find only mountains and barren plains. Water is plentiful and irrigation practiced. Year after year enormous crops of wheat, barley, oats, etc., are raised here. The lands, even up to the very mountains, are seen to be "bringing in their sheaves."

After crossing the main Rockies at the Mullan Tunnel, the valley or cañon of the Hell Gate River is followed to Missoula. In this valley are found many fine ranches. The valley would not be called wide, but there is room for many ranch farms of the finest sort. They are set down in the midst of grand scenery. The mountains tower high above them. Some of them are colossal. Magnificent cliffs, grand forests, tremendous peaks, sweep past in panoramic style as the train thunders down the gorge. It is a wild and exciting ride, in the very depths of the range.

The Bitter Root Valley is another of Montana's rich, very rich, farming regions. It runs southward from the main line, and a branch road extends up the valley fifty miles.

The Missoula River valley, stretching northwestward, parallel to the main line of road, but on the opposite side of the mountain range, is still another, rich in grain fields. The Cœur d'Aléne branch follows this valley and the St. Regis over the wild range to the Cœur d'Aléne mining regions. There it connects with a steamer for Cœur d'Aléne City via river and lake of the same name. Thence a branch railroad extends to Spokane.

After the main line of railroad crosses the Mission Range it follows the Clark Fork of the Columbia to Lake Pend d' Oreille. The valley is a beautiful one in places, and many ranches are located in it. Arable bottoms alternate with timbered parks, while the mountains rise above them much the same as along the Hell Gate.

Irrigation is beginning to play an important part in the development

of Montana. In the Yellowstone Valley numerous irrigation enterprises are in operation or under way. At Miles City the Tongue River valley has a completed canal twelve miles long. Near Billings and Forsythe large irrigation works are being prosecuted. The development of the Yellowstone Valley has hardly begun. In the Gallatin and Bitter Root valleys more has been accomplished. Many irrigation canals are in use in both valleys. As yet, however, these valleys are scarcely more than prospected in the line of agricultural improvement. The next ten years will see unexampled energy in this line. The mineral industries of Montana have overshadowed the agricultural thus far. Now a change is coming. Capital, brains, and energy are being employed toward the settlement and cultivation of the unrivaled valleys of this glorious State. A new era is dawning.

From the Montana-Dakota boundary line westward to the very mountains, the country is a great live-stock range. The immediate valley of the Yellowstone is not especially given over to this industry, save during the shipping season in autumn. At that time thousands and thousands of cattle blacken the brown surface of the valley. Then the shipping stations at the railroad have long lines of cattle cars awaiting the coming of the beasts. The strong shipping corrals are filled with dense droves of wild range steers huddling together. As fast as one train is loaded it rolls away and another takes its place. As frequently as one herd is disposed of the corrals are crowded with fresh "critters."

Ordinarily the traveler will see little evidence that this is the stockman's country. The cattle range far back among the uplands. There they crop the rich herbage that rapidly fattens them, and when fall arrives are in prime condition for shipment to the stock-yards at St. Paul and Chicago. During the season of 1895 there were shipped between 9,000 and 10,000 car-loads of beef cattle, aggregating considerably more than 200,000 head. Large flocks of sheep are raised. The wool clip for 1895 was 20,660,000 pounds, worth over $2,000,000.

Montana is one of the richest States in the Union in minerals. Its hills and mountains—aye, the sands of its rivers and creeks—seem to grow minerals. Butte is the largest mining and smelting city in the world. The region contiguous to Helena is a mineral one. Back in the mountains, all over the State, remote from railroads, are mining towns, and new camps are being formed all the time. The wealth of the State in this respect is not confined to silver, as one might at first suppose. Gold, iron, copper, and coal are found in large quantities. Since the crusade against silver began, gold mining has received a great impetus. This is true both as regards ledge and placer mining. The great value of the copper mines is well known. The town of Anaconda, near Butte, is entirely devoted to

1. PARADISE BLUFF, CLARK FORK RIVER

2. CABINET GORGE, CLARK FORK RIVER

copper. There are enormous smelters located there, employing thousands of men.

Coal, both for fuel and coking, is found at many places. The State is undoubtedly very rich in this respect, rendering it entirely independent of outside localities for a good fuel supply.

It is claimed that asphalt, of as fine quality as the celebrated Trinidad asphalt, exists near Red Lodge.

The value of the gold output in 1895 was more than $4,000,000. There were also nearly 15,000,000 ounces of silver produced, one-half of which came from copper ores.

Montana's output of valuable metals for 1895 amounted to $47,000,000, or in excess of Colorado by $12,000,000.

The iron deposits of the State are supposed to be very great. When the time arrives for their utilization this industry will take a front rank with coal, copper, silver, and gold.

The Northern Pacific Railroad has over 1,300 miles of track in Montana, including branch lines and excluding sidings, etc.; more than one-half of this is comprised in the main line. This runs via Helena. At Logan, a branch road known as the Butte Air Line crosses the mountains to Butte. This route, a mountain line also, gives the traveler a very different outlook than does the other. Which is the preferable one is entirely a matter of opinion. The character of the range, while like, is yet unlike the mountains beyond Helena. At Butte the Northern Pacific proper ends. The Montana Union extends from Butte to Garrison on the main line west of Helena, passing through the splendid Deer Lodge Valley. The passenger, if he desires, can go via the Butte line and reach the through train again at Garrison without losing any time.

IDAHO.

The region where the railroad enters Idaho is one of wild, rugged grandeur. Rushing along the banks of the pale green, ever beautiful Clark Fork, past Thompson Falls, Cabinet Gorge, and a succession of rocky cliffs, piney parks, and grain fields, the train crosses the Idaho line where the mountains lift themselves toward the very skies. A grand river is the Clark Fork. The springs, creeks, and snow-banks from which it is born are far back in the inmost recesses of the mountains. Some of them are in the Silver Bow Mountains around Butte; others burst out from the glistening peaks of the Mission Range about the Flathead Valley; many of them thread the cañons of the Bitter Root and hurry through the black gulches of the Cœur d'Aléne ranges. Soon after entering Idaho the river expands into a broad lake, Pend d'Oreille. There are many beautiful lakes in the world. There are many beautiful lakes in

our own country — in every part of it. Mountainous and hilly regions are prolific of them. Seldom do you find one that will touch more hearts, appeal to those subtler, softer instincts of humanity, than does this gem of the mountains. As the tourist stands on the beach at Hope and looks out across its waters, he is within a few miles of the British Columbia line. And yet he will think himself in Italy. There is a peculiar appearance about this lake (it is always there) that makes me think of a southern, sensuous, sleepy climate, where figs, oranges, tropical flowers and fruits grow; where southern breezes and indolence and lackadaisical manners are found.

For many miles the railroad winds along its shores, the mountains climbing high overhead on the other side of the track. This part of Idaho is principally a timbered one, with farming areas scattered here and there. From Spokane, in Washington, a branch railroad runs south, which, swinging to the east, enters Idaho and traverses one of the most fertile portions of the West. This is the noted Potlatch and Nez Percé country. With a climate unexcelled and a soil equal to any demands made upon it, this decomposed volcanic wash grows vegetables, grains, and fruits that fairly stagger belief. Irrigation is not an essential of farming in this region. Neither is it a new, untried land whose peculiarities are yet to be learned. White men and Indians have proved its capabilities. The Nez Percés, one of the oldest, most civilized and wealthiest of the tribes, have farmed with fine success for years. Now that more than 500,000 acres of their reservation have been restored to the public domain, the enterprising white man can try conclusions with the red man in a more peaceful way than usual. The Potlatch country adjoins the Nez Percé reservation on the north and the Palouse country on the west. The region is already well settled, has thriving towns and many mining camps that afford first-class markets for the produce raised.

WASHINGTON AND OREGON.

Spokane is the gateway to Washington and Oregon. A great deal of historical romance and tradition hovers over this region. Truth reads like fiction. Its mountains and plains and rivers are full of deeds of adventure and heroism in the dawning hours of its history. Its salubrity of climate, grand forests, mighty mountains, great rivers, prolific valleys, varied fisheries, are all adduced as arguments to support the contention that it is the garden spot of the country. And who shall say them nay? Certainly not I.

To the north from Spokane lies the beautiful Colville Valley, settled long, long ago by the Jesuits with their missions. Beyond that is the Okinagon country. Westward lie the Big Bend and Chelan regions.

Southward is the Palouse Valley, the Red River Valley of the West, that raises its huge crops of grain as regularly as the seasons roll around. East from the Palouse, the Potlatch country of Idaho, already mentioned, adjoins it, while southwestward from it is the Walla Walla country, the land of Whitman and of magnificent orchards.

These various regions have much in common. The Columbia River drains them all. Volcanic outbursts have covered them all with lava, which, becoming decomposed, has given them the rich soil which is largely their wealth. Except upon the mountains and on the streams there is a dearth of timber. So far as fuel goes, however, there are immense deposits of coal to supply this lack. In some portions irrigation is necessary, in others not. The Palouse, Potlatch, Walla Walla, and Nez Percé lands are supplied with moisture by the warm winds that sweep in from the ocean. The Columbia Valley supplies the trough, or vent, through which they pour themselves. Rain also visits these regions in considerable quantity. The crops of grain and fruit raised are simply enormous, and seek an outlet on the coast and in the mining camps.

Following the railroad we pass over a wide plain that, with many ups and downs, slopes gradually to the Columbia River. Now this region is useful only for grazing. With water at hand, it would furnish homes for a vast multitude. Some day the water will be there. Even at this early day in the history of irrigation with us, plans have been discussed for turning upon this plain the mighty volume of the Columbia itself.

At Pasco the Columbia is bridged and the railroad seeks an outlet across the mountains to the coast. The valley of theYakima River points the way. As one gazes from the car window, while the train threads its way for 150 miles through the valley to the mountains, he wonders what it is for. At numerous stations he notes that civilization still keeps company with him; that people live there. But in its somewhat bleak and dull-gray surface he sees naught save desolation. And yet this valley is going to support hundreds of thousands of people. Southern California, Riverside, Pasadena, Redlands, etc., are going to be duplicated right there. No use arguing the question — it's coming sure! That river you see tells the story. Mark you! Let the water now flowing to waste be spread over that plain — it will transform it into a garden. 'Tisn't a theory, it's a fact. It has been and is being done. Leave the train at Kennewick, Kiona, Prosser, Toppenish, and especially at North Yakima and Ellensburg. Ha! Won't you rub your eyes then? Ride from Toppenish to Zillah and see the hop yards, peach, prune, and cherry orchards, by the 50 and 100 acres. See that large canal delivering its ample supply of water to the thousands of acres in the Sunnyside country. Spend two or three days at North Yakima, looking over the Moxee, the Ahtanum,

Natchez, and Cowychee valleys, with their irrigating canals, and ten to one you invest in a ten or twenty acre tract "for a nest-egg," you know. In one county alone in this valley there are between 300 and 400 miles of canals and nearly 57,000 acres under cultivation, and this is scarcely a beginning. The Kittitas Valley, about Ellensburg, is a natural born meadow, and as beautiful as fertile.

On the eastern slope of the Cascades are deposits of coal, iron and copper. The coal is being mined in large quantities. The mountains are covered with pine, fir, cedar, spruce, etc. Across the mountains, and the scenic Puget Sound Country is before us. A moist climate renders irrigation unnecessary. All the fruits and flowers and vegetables thrive. Hop and grain fields greet the eye. The river valleys are quite well settled where the forests allow of settlement. Large areas in the sound country are being set out in orchards. The same is true in Oregon. The large and fertile valleys there are also most prolific in yields of grain, vegetables, and fruits. The valleys of the Columbia, Willamette, etc., support a large agricultural population.

Thus briefly we have pointed out a few of the characteristics of this great Northwest. It is great in all respects. Its people love it, and are developing it in a manner worthy of its glowing future. It is entering upon a new era of prosperity, and the dissatisfied of other climes can here be suited.

It will be noted from the preceding that from a scenic point of view the Northern Pacific Railroad is in one respect greatly favored among railroads. *An unusually large proportion of it lies along the banks of streams or lakes.* This materially adds to the pleasure of the outlook from the car windows. Water is always an important feature of a landscape. The Lake Park Region, Heart River, Yellowstone River, Gallatin and Missouri rivers, east of the mountains; the Hell Gate, Jocko, Clark Fork of the Columbia, Lake Pend d'Oreille and the Yakima River, west of the Rockies and east of the Cascades, and the Green River, Puget Sound, Cowlitz, Columbia, and Willamette rivers west of the Cascades, form a symposium of an exceptional sort. One has but to see this region to realize how important an adjunct these lakes and streams, with their accompanying cañons, valleys, and mountains, are to travel.

1. HIGH-SCHOOL BUILDING, DULUTH. 2. STREET SCENE IN DULUTH.

SCENES IN WINNIPEG, MANITOBA.

NORTHERN PACIFIC CITIES.

LIKE the diamonds of a coronet are the cities of the Northern Pacific country. They glitter and sparkle with the energy and push of modern improvement and civilization. Nothing is too good for them. Modern science, modern engineering, modern sanitary science, modern architecture, modern common sense have all been made contributory to their comfort, beauty, health, cleanliness, appearance. Electric lights and electric cars, noble buildings and well-paved streets, systems of water supply and sewage, boulevards, and, in many cases, magnificent parks that will vie with those of older communities, are found. Like the planets that whirl through space about us, some are of greater, others of lesser, magnitude. But of the Northwest — the great Northwest — they are all a part, and mighty proud of it they are, too.

At the threshold of this great Northwest lie St. Paul and Minneapolis. Here, in the midst of prairie land, by the side of the St. Anthony Falls of Father Hennepin, and at the head of navigation of the great father of waters, nature and circumstance have produced a pair of strong, healthy cities. Very diverse in many respects, their interests and destinies are yet one. United they will stand, divided they will fall. The commercial and industrial strategic importance of these cities will be seen at a glance by the following table of railway connections, viz.:

			Railways.
St. Paul and Minneapolis	to	Chicago and the East	6
" "	"	" Duluth, West Superior, and the lakes	4
" "	"	" Winnipeg and Manitoba	2
" "	"	" Northwest and Pacific Coast	3
" "	"	" the West	3
" "	"	" South and Southwest	5

In other words, their steel fingers reach out in every direction, drawing in the products of the land, and exchanging for them the manufactures and necessaries of life furnished by the cities. The steady march of modern improvement is seen on every hand. Asphalt streets, sky-scraping buildings, electric and cable lines, parks, massive national, State,

city, and county buildings, long rows of shade trees on residence streets, fine churches and school buildings are a few of these evidences.

The State Capitol is located at St. Paul, the State University at Minneapolis. A new and imposing capitol to cost $2,000,000 is to be erected at once on an elevated site. The reputation of the State University is now second to none. The Presbyterians, Methodists, and Catholics also have fine educational institutions in the suburbs of the cities.

Between the "twin cities" and Staples, the junction of the St. Paul and Duluth lines, are Anoka, St. Cloud, and Little Falls. Located on the banks of the Mississippi, they derive much importance from that fact. Anoka is at the junction of Rum River with the former, and has a large lumber trade. St. Cloud has some of the best granite quarries in the West, and also produces a considerable quantity of flour. Here is located the State Reformatory — not penitentiary. Little Falls is an important lumber center. The finest sawmill, probably, in the West is located here. It is a mammoth affair and a revolution to one who has knowledge only of the old-fashioned sawmill.

From Little Falls the old main line extends to Brainerd, where connection is made with the Duluth line. The Little Falls cut-off to Staples is now used by all through transcontinental trains.

At the extreme eastern end of the Duluth line is Ashland in Wisconsin. Situated on Chequamegon Bay, with the Apostle Islands in full view, it has always been noted as a summer resort. To this region come those afflicted with hay fever. Ashland is an important shipping point for the Gogebic iron ores, and the huge ore docks that extend far out into the bay are an index of the magnitude of this trade.

At the head of Lake Superior are two cities that, like St. Paul and Minneapolis, are rivals, yet indissolubly connected by a tie that can not be severed. Duluth and Superior — which includes all the variations of that name — whether or no, are so interlinked in every respect that they must "sink or swim" together. One may with entire convenience live in one place and do business in the other. The huge wharves, elevators, flour mills, and coal docks seen in either city are almost equally beneficial to both. The commerce of these ports is enormous, and steamers buffet the waves and storms of the lake from earliest spring, until the icy fetters claim their own and cover the waters with impenetrable ice.

The cities are fully abreast the times in all municipal improvements. Their business men are live and energetic, with unbounded faith in the future destiny of these places.

West of Duluth, 119 miles, on the picturesque banks of the Mississippi, is Brainerd. Here are located large and important car and locomotive repair shops of the railroad company. Brainerd is an important

lumber-shipping point. Another of the large lumber mills, equipped with all modern improvements, is found here. A railroad, devoted entirely to hauling logs, extends into the heart of the pine region northward.

At Winnipeg Junction, 225 miles west of St. Paul, the Manitoba division deflects from the main line, traversing the Red River Valley to Winnipeg.

Grand Forks is the principal point on this division, excluding Winnipeg. It is in North Dakota, at the junction of the Red and Red Lake rivers, and is one of the two largest cities in the State. The State University is located here, and the city is substantially built, in large part of stone and brick, and it is in the heart of the great Red River Valley. It is an entrepôt for grain, enormous shipments being made from its five mammoth elevators. A woolen mill, one of two or three in the Northwest, does a thriving business here. The Company has recently built a large brick, modern building in order to handle properly its increasing business.

Winnipeg, Manitoba, is the terminus of this division. This is one of the important and substantial cities of Canada. Settlement of this place dates back a long period. It is located at the junction of the Red and Assiniboine rivers. It is a thoroughly modern city, with fine hotels, public buildings, business blocks, and flouring mills. "Remember the Sabbath day to keep it holy" is literally interpreted here. On that day all street cars cease to run, and the Sabbath becomes a day of rest and worship indeed. To an American this seems somewhat odd, but shall we say it is not for the better? Winnipeg is the seat of government for the province of Manitoba, and has a population of about 40,000.

Crookston and Grafton are smaller, but growing, cities of the Red River Valley. They are each in the heart of this prolific region and points of shipment of grain, vegetables, hay, and farm produce in general. One is south, the other north of Grand Forks.

After leaving the Lake Park Region and Winnipeg Junction, the main line of road takes a straight shoot across the lower Red River Valley. In this latitude the Red River forms the boundary between Minnesota and North Dakota. At the point where the railroad crosses it there are two cities, Moorhead, in Minnesota, and Fargo, in North Dakota. The former is one of the important towns of Minnesota. Swedish and Norwegian educational institutions, and the State Normal School, are located here. It is a large shipping point for grain, vegetables, cattle, sheep, hogs, and butter.

Fargo is one of the most vigorous of Western cities. Since the great fire, which a few years ago laid most of it in ashes, it has forged ahead rapidly. It is a great distributing point for agricultural implements. Some of the finest farms of the Red River Valley are in this portion of it,

rendering Fargo, to a considerable extent, a wholesaling point. It has extremely modern buildings and improvements, including paved streets. Most of its new business blocks are of brick — a fine quality — burned here.

Valley City, on the Sheyenne River, is one of the thriving, and Jamestown, in the James River Valley, is one of the prettiest towns of North Dakota. This region is one of the finest in the West for wild-fowl shooting. Geese, ducks, prairie chickens, etc., are found in large numbers.

Bismarck, the capital of North Dakota, is situated on the east bank of the Missouri River, 444 miles west of St. Paul. Steamers still run during the season between Bismarck and Upper Missouri River points. The country surrounding it is a good farming and grazing one, and antelope, deer, elk, ducks, and prairie chickens are found.

Crossing the big river on a steel and iron bridge that cost $1,000,000, the train arrives at Mandan, the terminus of the Dakota and Missouri divisions, where watches are set back one hour going westward, the change from central to mountain time being made here.

Dickinson, 110 miles west of Mandan, is nearly 800 feet higher. Large shipments of cattle are made from here, it ranking as one of the most important points in this respect on the road.

Glendive is the headquarters of the Missouri and Yellowstone divisions, and the first town on the road in the Yellowstone Valley.

Miles City and Fort Keogh are situated at the mouth of the Tongue River. Miles City is the center of a wide cattle and sheep country. As the valley is settled it will become still more important. It is a good point of departure for hunting parties for large game in neighboring mountains.

Billings is another of the larger towns of the valley. Its shipments of wool are heavier than from any other point in Montana. It will in the future be the center of a large irrigation region also.

Bozeman is the large town of the rich Gallatin Valley. It is a progressive place, with an opera house, public library, electric car-lines, lights, etc. The State Agricultural College is located here. Bozeman and Ferris Hot Springs, only six miles distant, are becoming popular as summer resorts.

At the base of the Rockies, 4,250 feet above sea-level lies Helena, the capital of Montana. It is in the center of a mineral region unsurpassed for richness. Within twenty-five miles there are over 3,000 quartz lodes that have been duly recorded. The branch line to Marysville, northwest from Helena, opens up a region wonderfully rich in gold ores. The line to Boulder, Wickes, etc., southward brings into touch

1. STREET SCENE, FARGO, N. D.
2. STAGE SETTING, KLINEFELTER OPERA HOUSE, DICKINSON, N. D.
3 INTERIOR OPERA HOUSE, JAMESTOWN, N. D.
4. STREET SCENE, GRAND FORKS, N. D.

NGTON.

SOUTHWEST FROM "JUMBO"

2. N. P. R. R. STATION SPOKANE

STREET SCENE, MISSOULA

with the outside world another field of mineral deposits. The depression in silver mining, while it undoubtedly had a serious effect in Montana, just as certainly stimulated gold mining. Helena, in common with all mining centers, felt these depressive effects, and likewise was benefited by the increased activity in gold properties. Now that the city has, in two elections, been made the permanent capital, decided advances in prosperity will be made. In its policy of concentrating the army in large, well-appointed posts, the United States Government has constructed at this point what is probably the finest post in the country. It is named Fort Harrison, after Ex-President Harrison. It lies just west of Helena, and after the train leaves the city, the red brick buildings of the fort are seen to the left.

Almost directly south of Helena, on the Butte Air Line, lies Butte, the great mining city. It is the largest mining city in the world. Gold, silver, and copper are the metals mined. The copper interests of Butte and Anaconda are of enormous value. The hoisting works of the mines and the smelters dot the hillsides and bottom lands. In merely a cursory glance over the valley as the train descends the grade after crossing the range, the great importance of this interest is seen. It is said that within a radius of one and one-half miles from the court house there are 4,000 miners employed. The gases exhaled from the chimneys of the smelters kill every green shrub, tree, and spear of grass in the immediate vicinity of Butte. So long as the city prospers and its position as a mining center remains the first, this fact does not appear to worry the people who call it home. The traveler seeking for knowledge can ill afford to pass Butte by. A lay-over of a day or two will well repay the intelligent man — or woman either, for that matter.

"The prettiest town in Montana!" Such is the expression often heard regarding Missoula. The man who will dispute it is brave indeed. The good feature of it all is that the other towns and cities seem to acquiesce in the feeling, and apparently feel no jealousy toward this Queen City of the Rockies. "Behold how good and how pleasant it is for brethren to dwell together in unity." Missoula is delightfully located at the mouth of Hell Gate Cañon, at the foot of the Bitter Root Valley. A cordon of mountains hems, yet does not *choke*, it in. The Missoula River divides the town into Missoula proper and South Missoula. Like all good Western cities, Missoula has fine brick buildings, street cars, electric lights etc. The State University is located here.

The finest large-game hunting in the West is found in the mountains reached from this little city. Elk, bear, deer, moose, mountain sheep, and white goats can all be found for the seeking.

Spokane is *the* city of Eastern Washington. I never visit Spokane

that I do not think that it can give many older, Eastern cities valuable points in city building. Its streets are roomy and light; its buildings of brick and stone are, some of them, positively elegant; its bridges strong and airy; its hotels and restaurants first-class. The electric cars go wherever the notion takes them, and cover a large amount of territory. But the great charm of Spokane is in its residence streets and residences. The architecture of its dwellings is refined and stylish, and in private grounds everything that can conduce to ornamentation is seized upon. Natural objects that in many places would have been removed, have been retained here and made to serve an esthetic turn. To Spokane converges the trade of the Colville Valley, the Big Bend Country, the Cœur d'Aléne region, the Palouse and Nez Percé country. This includes both agricultural and mining products. The agricultural and horticultural interests of these sections are growing steadily. The mining developments of the mineral regions tributary to Spokane have been exceedingly gratifying within the past few years. They indicate rich ore deposits in the mountains in all directions, not alone in one or two localities. The falls of the Spokane River are in the heart of the city, and furnish power for the electric-light plant and electric and cable cars.

South of Spokane, in the Palouse and contiguous regions, are smaller towns that are gradually making their mark. Some of these places are in Washington, some in Idaho. The Spokane & Palouse branch follows vaguely, in its twistings among the fertile hills and valleys, the boundary line between these States. Oakesdale, Garfield, Palouse, Pullman, and Uniontown are the more prominent points in Washington. All of them are shipping points for the large quantities of grain raised in the region. Pullman has the honor of being the seat of the Washington Agricultural College. Its large and fine buildings are a conspicuous feature of the landscape. The college is doing a splendid work in developing the capabilities of agricultural and horticultural Washington.

In Idaho, Vollmer, Moscow, Kendrick, Juliaetta, Genessee, and Lewiston are embryo future cities. Moscow has the Idaho State University within its limits. A fine brick building stands upon an elevated point, and the university is in successful operation. Lewiston, ten miles from Uniontown on the Palouse branch, and with which it is connected by a daily stage line, is on the threshold of the great Nez Percé reservation. Since the opening of the reservation it has become a very important point. All land entries must be made there, and it is the central town of an extended range of country.

This wide region, including the Palouse, Potlatch, and Nez Percé lands, is the Red River Valley of the North Pacific Slope, and each of these places expects to be the greatest in the kingdom as time rolls along.

Westward from Spokane, in the now widely-known Yakima Valley, are two places worthy of mention. These are North Yakima and Ellensburg. The latter is in the center of the Kittitas Valley, as that part of the Yakima Valley is called. These towns are the product of irrigation. They are, at the present time, the largest places in a region that promises more in irrigation development than any other valley in the land. It is well worth one's while to stop off and here observe what man can do with an unfailing stream of water.

Across the grand old Cascades, down the leafy gorge of Green River, whose purling waters race the train down the cañon, and we are in the Puget Sound Country — a land of timber, orchards, hops, a beautiful sound, and fine cities.

Shooting straight away north from the base of Mount Rainier the train soon brings to view a city set upon a hill. It is a noble city — one of modern improvements, fine buildings, schools of learning, mammoth wharves where ocean vessels discharge and receive their cargoes, immense sawmills, whose products are shipped to China, Japan, and South America, and a climate mild and equable. The forest made way for the city, as is indeed the case with all the Puget Sound cities. Those who builded it builded well. It overlooks Commencement Bay, and has a glorious view of the Olympic Mountains and of Mount Rainier, the grandest mountain of the United States. Tacoma is a great shipping point. This is especially true as regards wheat, coal, lumber, and tea and silk from the Occident. The Northern Pacific Steamship Company have a fleet of fine steamers plying between Tacoma and Yokohama and Hongkong. This is an American line pure and simple. These steamers bring cargoes of tea and silks, which, upon arrival at Tacoma, are placed in special trains and, as such, rushed across the continent via the Northern Pacific Road, at express speed, to Chicago and New York. This line is doing much to cement and extend the commercial relations existent between the United States and Japan and China, and deserves the patronage of true American travelers and shippers. The steamers sail from Tacoma about once a month. Reservations and information can be obtained from any Northern Pacific Railroad General or District Passenger Agent, or from the General Passenger Office at St. Paul.

Two hours' ride by steamer from Tacoma, over the beautiful waters of the sound; one hour's ride on the "Fast Limited," the "Flyer," by the Northern Pacific Railroad, is Seattle. Named after an old Indian chief, whose withered and wrinkled daughter still survives and honors the city by her presence, Seattle is a "scorcher" among Western cities. It has a large wholesale trade, many sawmills and manufactories. From Elliott Bay the ground rises in hills and terraces, thus making of it

to the sight-seer from steamer deck a terraced city. Lakes Washington and Union lie back of the city among the hills, and are fine summer resorts. The heavy jobbing houses are massed on the level ground on the bay, and present an appearance of solidity and *business* second to none. Seattle has a very heavy ocean and sound trade. Its public buildings are imposing, its churches bespeak strong congregations, its cable and electric car-lines extend to all parts of the city. The Olympic Range and Mount Rainier are also visible from here. The educational facilities are of the best. It is connected by the Seattle, Lake Shore & Eastern Railroad with British Columbia on the north.

Other important cities of the Sound Country are Port Townsend, Victoria, Everett, Fairhaven, New Whatcom, Anacortes, and Port Angeles.

A daily line of steamers plies between Tacoma and Seattle, and the majority of these places. With the exception of Victoria, they are all in United States territory. Victoria is situated at the southeastern end of Vancouver Island, immediately off the Strait of Juan de Fuca. The fact that it has a considerable population — 20,000 and more — and is on British territory, makes it an interesting place to visit.

West and south from Seattle and Tacoma is Olympia, the capital of Washington. It is noted as having large oyster-beds of the native oysters, a small though most delicious bivalve.

Beyond Olympia is the Gray's Harbor Country, and between are Centralia and Chehalis, both prosperous towns.

The through trains of the Northern Pacific Railroad run to Portland. A great city is found here. It is an old city, a wealthy city, and a beautiful one. It is situated on the Willamette River, twelve miles above its confluence with the Columbia. It has a large ocean commerce, it being practically a deep seaport. Some of the large buildings, its hotels, newspaper, office, and theater buildings, etc., would grace any city in the land.

A very fine Union Station, to be used by all the railroads, is completed. The climate is pleasant, never severe; the scenery grand. Mount Hood, 11,225 feet high, a grand snow-capped peak, stands sentinel over the city. Mount St. Helens and other peaks of the Cascades are also in plain view. The surrounding country is fertile, and vegetable gardens and orchards are seen in profusion.

Thus briefly we have sketched the more important centers of population in our northwestern empire. But words, dry statistics, etc., give but a faint idea of them. To understand a country, a city, it must be seen. Its life, its people, must be seen and known. Some cities will thrill one with the energy, the earnestness of life and ambition shown. Others are devoid of enterprise, and show too plainly the dry rot of aimlessness. Go and see these sturdy, ambitious young cities — then they will be understood.

IN RED RIVER VALLEY

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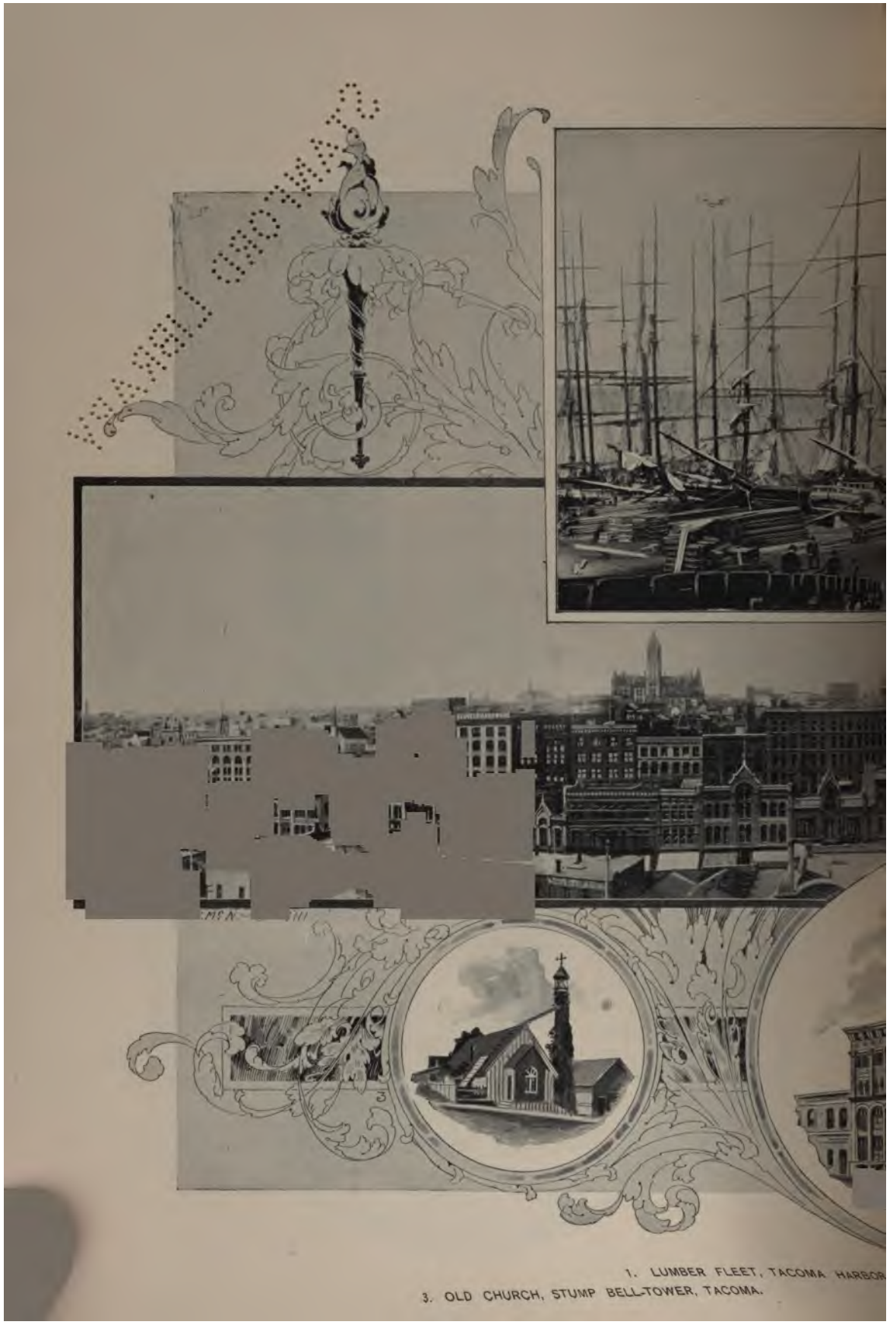

1. LUMBER FLEET, TACOMA HARBOR.
3. OLD CHURCH, STUMP BELL-TOWER, TACOMA.

2. *BIRD'S-EYE VIEW OF TACOMA, WASHINGTON.*

5. NORTHERN PACIFIC RAILROAD OFFICES.

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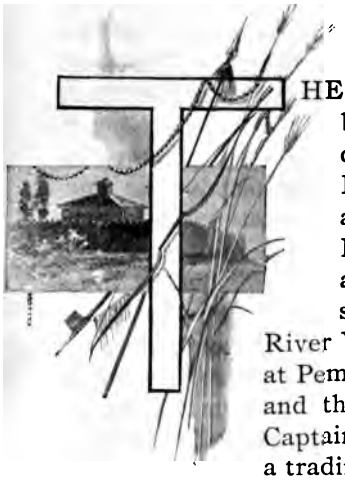

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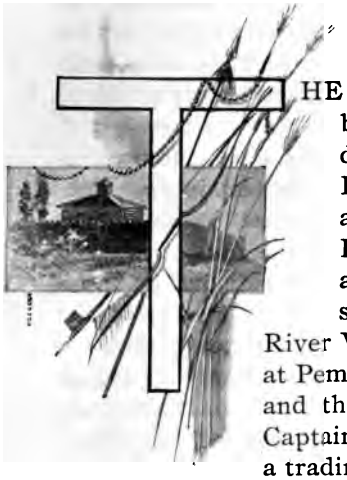

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"I was at Pembina in 1852 and went through the highest flood of the raging Red since that of the noted high flood of 1826, and I am told by the oldest inhabitant that during the high water of 1852 the valley was inundated to a depth of five feet for a term of five weeks, and it is claimed that canoes were run from the Red River to St. Paul.

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"We had two canoes and a Hudson Bay Company barge. When wind and weather was favorable we sailed with the barges, hunted geese, ducks, pigeons in the woods and duck-eggs on the drift-wood piles.

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"While on our aquatic excursions in the canoes, in crossing over the prairies, then under water, I noticed a peculiar red color to the water. As it was so different from that of the river in its natural state, while confined within its banks, I most naturally commenced theorizing as to the cause. The water in the big river was then of the same color as that on the flooded prairie, while the water of the Pembina River was the same muddy color as before. * * * * Hence I reached the conclusion that the red color of the Red River at that time came from the steeping of the vegetables and grass leaves on the flooded prairies as it passed on to the Red River rapids, four miles above lower Fort Garry, then called the 'stone fort.' Having noticed after the floods of other rivers, say the Ohio, Wabash, and Mississippi, etc., the water kept in the valleys after a few days always takes the red color of our Red River, it left no doubt in my mind that the color was owing to the coloring matter abstracted from the leaves and vegetable matter during the overflow. In all the ordinary floods of the Red River the water thickens with mud or clay, and it is only in the lowest stage that you can see to spear fish in it, while during the overflowing of our greatest floods when the waters are red, the bottoms can be seen plainly and fish could be easily speared in four feet of water."

I give the matter prominence, trusting it may draw forth something that will definitely settle the question, as it seems involved in uncertainty.

The Red River country has entered upon a new era. For years it has been known as the region where the finest wheat in the world was grown. So successful were its farmers in this, that wheat became the one and only crop of consequence. With the fall in price, profits dropped. Economies were practiced and improved machinery enabled them still to raise wheat profitably. But above all, they then turned their attention to

diversified farming. Oats, flax, potatoes, onions, barley, corn, etc., were planted in increasing quantity. Hogs, poultry, cattle, sheep, and horses were raised. Dairying became an established industry. It is a fact that, until within two or three years, large quantities of butter and eggs were shipped into North Dakota, to supply *farmers* with those necessaries of daily living. This has changed. Now they raise their own butter and eggs, vegetables, beef, poultry and mutton. Sheep raising has taken a strong hold. There are now at least 125,000 sheep in the Red River Valley. They are in medium-sized flocks, which is preferable. Some farmers have two sheep and some have hundreds. The two sheep will furnish yarn for the family's stockings and mittens. The large herds will supply the family's clothing and bring in money besides. The wool is sent to Grand Forks and the mill there returns it in yarn and woolen goods.

The grades of stock are good and constantly improving. Holstein and Shorthorn cattle, Shropshire and Merino sheep, and good horses are being raised. They are raising their own pork, too.

Corn has become an important crop. It has been found that wheat grown after a corn crop yields better than after summer fallow. It is also — and this is especially so with the small farmer — valuable for fodder.

The labor of caring for a corn crop is much lessened by the use of the mechanical corn-binder and the shredder and husker.

Flax is being grown more extensively, both for sale and for feed to stock. It is profitable, very, for both purposes.

Farming in the Red River Valley is an easy occupation. The ground is level — level as a floor. A hill is almost a curiosity. The farmer rides when he plows, plants, cultivates, harvests. All farm machinery is now arranged so that the farmer can ride when using it. The threshing is done by regular crews. The farmer has only to furnish teams to haul away the threshed grain. The farmer's wife doesn't have to cook for a threshing outfit. Each crew has its own cooking-wagon and cook. These facts divest farming of most of its drudgery. Many of the Red River Valley farmers spend their winters in the South or in California.

The homes in the valley are unsurpassed by farmers' homes in Ohio or New York. Large, red barns with comfortable quarters for livestock, are seen from one end of the valley to the other. The houses are neat, ornamental structures, with gardens and groves about them. Trees grow well and nearly every small farmer, especially, has his tree park.

There is land yet to be bought. The big bonanza farms are gradually being divided into smaller holdings. From $20 to $30 and $35 per acre buys the best land in the valley. There is no clearing to be done. Much land that has been cultivated can be bought. There is no easier land in the world to farm than the black loam of the Red River Valley.

A HOME IN THE RED RIVER VALLEY.

PLOWING IN THE RED RIVER VALLEY.

1. CHAMBER OF COMMERCE BUILDING.

4. HOTEL PORTLAND.

GON.
ER BUILDING.
3. A RUSTIC DRIVEWAY.
5. PORTLAND AND *MOUNT ST. HELENS.*

R.M.S.N—CO CHI.

YELLOWSTONE NATIONAL PARK.

TIME and again the thought has recurred to me, why was it that the Yellowstone Park was so long undiscovered? It was not until 1870 that this remarkable locality really became known. True, intimations that a strange land lay concealed in the bosom of the mountains were occasionally flashed over the country. As far back as the return of the Lewis and Clark expedition in 1806, some inkling of what was to be found was known to a few. The stories told, however, came largely from frontier guides and mountaineers, who knew, many of them, only in part of what they told.

It was not until 1869–70 that well-directed efforts were made by residents of Montana to explore this region, and that was more than sixty years after the Lewis and Clark expedition. In the interim, expedition after expedition sent out by the Government had crossed the continent. The search for the most suitable route for a — the, as it was then called — Pacific Railway was earnestly prosecuted. The whole western domain was crossed and recrossed by these exploring parties — and still the Yellowstone Park country remained undiscovered. Why was it? Undoubtedly there was a strong natural and physical reason for this. The Park region is an irregular plateau from 7,000 to 8,000 feet above sea-level. It is hemmed in by mountains, high and rugged. On the eastern and southern borders, especially, these mountain walls form some of the most impassable barriers in this country. From 8,000 to 14,000 feet the peaks rise into cloudland. Their flanks are gashed by terrific cañons; the slopes covered with interminable forests; the forests themselves rendered, in places, absolutely impenetrable by a network of fallen timber; great palisades of rock wind for mile after mile, a most impregnable barrier to progress.

But why no effort to flank these obstacles and penetrate within the mysterious land? I am not of those who believe that Providence has no interest in the affairs of men. I am rather of the opinion of Lincoln, who seemed almost to hang upon the Almighty in the great crisis of our history, that God is closer to us than we often think. In physical phenomena he veils a divine purpose, a supreme superintendency.

The spirit of the American people seems to be largely a utilitarian one. We measure everything, apparently, by its value in dollars and cents.

How much standing timber is there on this tract of land? How many tons of gold, or silver, or iron, or copper, or coal can be mined from that mountain? How many fish can be taken from that lake and shipped to market? How much water power in that stream? Such appears to be our natural bent. That these objects of nature can have any other value than a pecuniary one, seems, unfortunately, never to occur to many of us. That the grandeur of a waterfall, the majesty of a mountain peak, the serenity of an Alpine lake, may have a value upon individual and national development in their higher, more refined senses, not measurable in dollars, appears to be entirely overlooked.

When the Government set aside the Yosemite Valley for a reserve, it gave it to the State of California in trust, to be cared for and preserved for this purpose. The fine valleys of the Yosemite were degraded to sheep pastures; the grand sequoia groves bartered to timber sharks. Public opinion, aroused at the flagrant outrage and breach of trust, demanded the re-ceding of the reserve to the general Government.

Why was the Park so long undiscovered? As often as I have pondered over this, I have always come to the same conclusion. It is outlined in the above discussion. "God moves in a mysterious way," and in His inscrutable wisdom He so concealed this grand heritage that it would not be discovered until the American people were sufficiently able to appreciate it as to preserve it in all its integrity.

Why, even the first expedition of any consequence into this region — the Washburn party of 1870 — discussed the question of taking possession of its more prominent points for private gain. Fortunately, there were those among them who saw the right course and impressed it upon the others. Thus, from intended sacrilege, through this expedition came about the segregation of the Yellowstone Park.

Had the discovery come sooner, what might not the result have been? Thus I am forced to feel that "in the fullness of time" — God's time — this great event occurred, and that the physical barriers were but the means toward the accomplishment of His great purpose.

The Government has absolute control of the Park. Two troops of cavalry are retained there under command of Capt. George S. Anderson. The quarters of the soldiers at Mammoth Hot Springs are known as Fort Yellowstone. Captain Anderson, also superintendent of the Park, has charge of the policing of the Park; the repairing of old roads, the construction of new ones; the protection of the game; the preservation of the characteristic features found there from mutilation and defacement; the capture of all poachers and vandals, etc. The Government has expended hundreds of thousands of dollars in the building of roads, trails, bridges, etc. The annual appropriation is between $50,000 and $75,000, and, large as it seems, is really scant for its purpose.

The railroad brings the tourist from his far-away home and sets him down amidst the mountains at the confines of the Park. "Thus far and no farther" is Uncle Sam's edict to railroads, and none may venture beyond the imaginary boundary line.

At this point — Cinnabar — the Transportation Company takes up the work. There are over 150 miles of stage-coach transportation through the Park from Cinnabar and return. A large outlay for horses, coaches, drivers, etc., is required. The roads and stage equipment are beyond compare with anything of the sort found elsewhere.

The Hotel Company controls the refection facilities of the Park. These comprise four large modern hotels at Mammoth Hot Springs, the Geysers, Lake, and Cañon, and three lunch stations at other points. It will readily be seen that these four agencies must dovetail into each other in operation, in order to avoid friction and annoyance to the tourist.

The tour of the Park, as now laid out, is an expanding one. I mean by this that, like a well written play or story, it proceeds by natural stages from the modest beginning, through the more exciting scenes and situations to the climax. The climax of this story of God is the Grand Cañon, and a thrilling climax it is. It is the place of all places in the Park where one feels as though he were standing on the verge of the infinite.

A TALK TO TOURISTS.

A tour of Yellowstone Park is something to be planned for — aye, for years. It should be planned intelligently. Then there should be no disappointments. There is no excuse at this late day, for tourists going there with the insane notion that they are going to see Central Park of New York City or Lincoln Park of Chicago, only on a grander scale.

I have known of tourists, both men and women, who seemed to think that there was to be no effort required on their part to see anything; that the geysers were to be brought to them on a server; that as they sat in the coaches the falls would change position so they could be viewed without leaving their seats; that nature had provided vast deposits of asphalt, so that all that was necessary for man to do was to roll it into position and, lo! a fine asphalt pavement was spread throughout the Park. Such tourists will suffer disappointment, and deserve to. While there is no hardship, there will be some fatigue.

The Park is not a man-made Park, and therein lies its glory. It is fresh from nature's beneficent hand, and man has only endeavored to make a pathway through it that it may be accessible. Assist nature, don't attempt to improve upon it, is the maxim that animates the landscape gardening and improvements here, and it is the correct one.

It must be borne in mind that hotels can not be set down at just such

points as will make each day's ride the easiest. The object is to see the stupendous wonders there, and the hotels and lunch stations must be placed so as to facilitate this.

The Park tour is planned so as to enable ordinary persons, those of moderate means, to see the most at a minimum expense and in *a reasonable time*. Those who can afford the time and money can prolong their stay to weeks if desired, and thus see far more, and as leisurely, as inclination prompts. The ordinary tourist does not, and can not in the time allowed, see thoroughly even the most important objects. As a matter of fact, a week could be spent at both the Upper Geyser Basin and the Grand Cañon. The five and one-half days' tour *does* give the tourist the opportunity, if the time be utilized aright, to see fairly well the choice morsels to be found there, and to carry away an intelligent idea of them and render him thankful for what he has seen. Even then it is necessary that much walking and some climbing be done. The stages can not and do not go everywhere. At Mammoth Hot Springs the terraces must be climbed more or less; at the Geyser Basins the geysers, and at the Grand Cañon, the falls and cañon, must be, to an extent, visited on foot. The coaches convey the tourist from hotel to hotel, etc., and this is sufficient work for horses and drivers, as every reasonable person will allow.

From the hotels some of the objects of interest can be partially visited by carriage or tourist wagon, if the tourist prefers to pay the extra price charged. At the Lower Geyser and Upper Geyser Basins and also at the Grand Cañon, tourist wagons make the round of such places as can be thus visited, for a reasonable fare. Many of the most interesting spots to be seen at all *must* be visited wholly or partially afoot. Wherever possible the roads have been constructed so as to bring the tourist as closely as possible to the points of greatest interest, and the regular coaches are all that is necessary. For instance, in running between the Lower and Upper Geyser Basins, the coaches cross the Firehole River and take their passengers directly to Excelsior Geyser, running over the very formation itself. Between Yellowstone Lake and Grand Cañon the road now runs at the very edge of Crater Hills, or Sulphur Mountain, and also within fifty feet or less of the Upper Falls at the Grand Cañon.

As a matter of fact, when one has decided to visit the Park, practice in pedestrianism should be regularly indulged every day for a week or ten days prior to departure from home. This will prepare one to meet all the conditions of successful sight-seeing in Yellowstone Park. If a disposition to find fault exists, because this or that is not exactly to his liking, the tourist should bear in mind a few facts. First, that he is not in a populous community, but in the very heart of the Rockies, 1,000 miles from either terminus of the Northern Pacific Railroad. Hotels in such a region

been in the valley it has been in a muddy, clayish color. You would naturally want to know why the misnomer of 'Red' should be applied to either of them. The water of Red Lake is clear and showing no sediment, while that of the Red River is muddy.

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on horseback. His statements as to what may be done, therefore, in the way of side trips are based upon actual experience.

LIVINGSTON TO MAMMOTH HOT SPRINGS.

The Park tour may really be said to begin at Livingston. The fifty-one mile ride on the cars up the Yellowstone Valley to Cinnabar is a glorious prelude to what follows and can hardly be disassociated from it. Soon after leaving Livingston the train passes through the Gate of the Mountains into Paradise Valley.

Large fields of grain extend from the river far up the slopes to the very mountains. The peaks rise to great heights. The grandest of them is Emigrant Peak, 10,629 feet above the sea. It is a massive one, and if seen when its upper regions are covered with snow, will not soon be forgotten.

At Yankee Jim's Cañon the railroad is carried along the face of a rocky bluff, with the river far below.

No finer trout-fishing is to be found than in the rapids of the Yellowstone between the Gate of the Mountains and Cinnabar. Those who have once experienced the thrill of angling thereabouts, are never content until they again haunt the pools and whip the rapids for the eager, gamey beauties found there.

At Cinnabar the train is exchanged for the stagecoach, and the traveler enters upon a new experience. Three miles beyond Cinnabar a small collection of log huts and stores is passed. This is Gardiner City. Here the road swings to the right and follows the Gardiner River, a rapid stream beset with immense boulders, almost to Mammoth Hot Springs. Among the crags that overhang the river an eagle's nest or two can be descried.

MAMMOTH HOT SPRINGS.

Uncle Sam's guardianship of the Park is at once seen, by the cavalry quarters located here — Fort Yellowstone — and the presence of officers in blue and gold. Just beyond the great hotel is a fine, though small, stone building, with iron bars across some of the windows. It is the place where those guilty of infractions of the laws governing the Park are temporarily provided with quarters.

At Mammoth Hot Springs the hotel is located at the edge of a travertine plain. Vegetation is scant except on the slopes of Terrace Mountain that surround it. A little distance to the west are the beautiful terraced springs, the brilliantly colored escarpments of which dazzle the eyesight. Near the hotel are two deep, black, cave-like depressions or pits, fenced around. Springs of living water once issued from them. Now they are dead — have been for ages, perhaps.

There are now nearly 200 acres of variously colored springs. Where

TABLE OF ELEVATIONS.

NAME.	DISTANCE FROM WELL-KNOWN POINT.	Elevation in Feet Above Sea Level.	NAMED AFTER.	IN GENERAL.
Livingston	1,007 miles from St. Paul	4,488	Johnston Livingston	Former director of N. P. R. R. Co.
Cinnabar	51 miles from Livingston	5,179	Cinnabar Mountain	Stagecoach ride begins here.
Mammoth Hot Springs	By road from Cinnabar, 7 miles	6,215	Mammoth character of phenomena	Park tour proper begins and ends here.
Golden Gate	4 miles s. by road from Mammoth Hot Springs	About 7,300	Yellow color of the walls	Gate is 1 mile long. Road cost $14,000.
Norris Geyser Basin	20 miles s. by road from Mammoth Hot Springs	About 7,400	Col. P. W. Norris	Norris was a former superintendent of park.
Lower Geyser Basin	20 miles s. by road from Norris Geyser Basin	About 7,200	Named from their locations	
Midway Geyser Basin	3 miles south by road from Lower Geyser Basin	About 7,200		
Upper Geyser Basin	9 miles south by road from Lower Geyser Basin	About 7,300		
Continental Divide	8½ miles east by road from Upper Geyser Basin	About 8,350		
Shoshone Point	12 miles from Upper Basin, on road to Yellowstone Lake	About 8,000	Overlooks Shoshone Lake	Grand view from this point.
Shoshone Lake	10 miles south from Upper Geyser Basin	7,740	Shoshone Indians	About 7 miles long, 2 to 4 miles wide.
Lewis Lake	8 miles south from west arm Yellowstone Lake, on road	7,720	Capt. Meriwether Lewis	Of Lewis and Clark expedition, 1804–6; 3 miles long, 2 miles wide.
Heart Lake	6 miles south of east from Lewis Lake, at the base of Mount Sheridan	7,469	Should be Hart Lake, after Hart Hunney	Hunney was an old-time hunter there; lake 3 miles long, 1½ miles wide.
Yellowstone Lake	Southeast corner of park, 17 miles south from Grand Cañon	7,741		One of the largest lakes in the world at such an elevation; about 20 miles long and 14 miles wide.
Hayden Valley	Between Yellowstone Lake Hotel and Grand Cañon	About 7,800	Dr. F. V. Hayden	In charge of the old Hayden United States Geological Survey.
Grand Cañon	Northern central part of the park, east from Norris Geyser Basin	7,850	Grandeur of the sight	About 20 miles long to Tower Creek; 1,200 feet deep at deepest part.
Yancey's	Stage station 20 miles east from Mammoth Hot Springs, on Cooke City road	About 6,200	Uncle John Yancey	Old mountaineer of the region, who still lives there.
Cinnabar Mountain	At Cinnabar	7,000	The mineral, cinnabar	Deposits of this mineral were supposed to exist in the mountain.
Electric Peak	8 miles northwest from Mammoth Hot Springs	11,155	Peculiar electric phenomena observed there	Northern boundary line of the park cuts the mountain.
Bunsen Peak	3 miles south from Mammoth Hot Springs	9,100	R. W. Bunsen	A celebrated chemist.
Mount Everts	2 miles east from Mammoth Hot Springs	7,900	T. C. Everts, Helena, Mont.	Became lost and was found here nearly dead after 37 days.
Quadrant Mountain	7 miles west from Golden Gate	10,200	Characteristic of the shape of the mountain	Almost directly west from head of Golden Gate.
Mount Holmes	6 miles west from Obsidian Cliff	10,300	W. H. Holmes	Of the old Hayden Survey.
Folsom Peak	10 miles southeast from Mammoth Hot Springs	9,200	David E. Folsom	Explored the park region in 1869.
Mount Sheridan	12 miles south from Lunch Station, on Yellowstone Lake	10,200	Gen. Phil. H. Sheridan	U. S. A.
Flat Mountain	9 miles southeast from Lunch Station, on Yellowstone Lake	9,000		Rather flat on top.
Colter Peak	7 miles south from Mount Langford	10,500	John Colter	Discoverer of Yellowstone Park, in 1807.
Mount Stevenson	16 miles southeast from hotel at Yellowstone Lake; 1 mile southwest from Mount Doane	10,300	James Stevenson	Of the old Hayden United States Geological Survey.
Mount Doane	16 miles southeast from hotel at Yellowstone Lake, on southeast shore, near Mounts Langford and Stevenson	10,500	Lieut. G. C. Doane	U. S. A., commanded escort of Washburn party of 1870.
Mount Langford	18 miles southeast from hotel at Yellowstone Lake, on southeast shore, 2 miles southeast from Mount Doane	10,600	N. P. Langford, St. Paul	An old explorer and first superintendent of park.
Jones' Pass	In mountains on east shore Yellowstone Lake, east from Lake Hotel	9,450	Capt. W. A. Jones	Now Major of Engineers, U. S. A.
Mount Chittenden	12 miles east from Yellowstone Lake Hotel	10,000	Geo. B. Chittenden	Of the old Hayden U. S. Geological Survey.
Cathedral Peak	4 miles northeast from Mount Chittenden	10,600	Its cathedral-like appearance	
Mount Washburn	7 miles northeast from Grand Cañon Hotel	10,000	Gen. H. D. Washburn	Former Surveyor-General of Montana and head of Washburn party; easily climbed.
Dunraven Peak	2 miles southwest from Mount Washburn	9,700	Earl of Dunraven	Visited park in 1874.
Hedges Peak	4 miles north from Grand Cañon Hotel	9,500	Cornelius Hedges	First man to publicly advocate the idea of a park.

does all this drainage run? At some places can be seen, at others heard, the underground river — Boiling or Hot River — that carries these heated waters down and under the hills to Gardiner River, a mile or two away.

That which has been and is not; that which is and a year hence may not be, and that which now is not but soon may be, are curiously related here. Birth, life, and death are strongly emphasized in the newly forming, the living, and the dead springs seen on every hand. At the very edge of the travertine plain — a plain of death, at the very base of the spring terraces — terraces of life and beauty, are Liberty Cap and Giant's Thumb. The one is forty-three feet high, the other, perhaps, one-half that. They were themselves at one time living springs, centers of radiance, of bright color. Utterly dead now — decrepit, they seem like connecting links between the past and present.

As the initial point of the Park tour proper, the tourist awaits with lively curiosity the hour of 2 P. M., when the guide collects his tourists about him much as a hen gathers her chicks about her, for the trip to the "formation." One feels a queer sensation as, for the first time, he stands hard by old Liberty Cap, a lone monument of how many thousands or millions of years ago he knows not, and throws his glance toward that strange cliff, the front of Jupiter Terrace. He may be pardoned if, for a moment, he feels a creepiness about him; it is all so new, so strange.

A quick scramble up a steep, chalky trail, and Jupiter Terrace and its beautiful pools lie beneath. The scene is apt to bewilder, and one could sit there an entire day and study the terrace, amazement growing stronger with each hour.

The springs rise in steps of various heights and widths. Intermingled with them are cliffs of a weathered, chalk or magnesia-like substance, soft and crumbly. Once the spring ceases, dies, the formation becomes as these rusty old cliffs; their light and beauty departs. The afternoon is spent in roaming about the terraces. Many and varied are they. They are all *so* beautiful, yet *so* varied, that one is at a loss to say, this one I like best.

Elephant's Back, Angel Terrace, Orange Geyser, Narrow Gauge, Minerva and Cleopatra Terraces are some of the most beautiful and interesting. The algous growths, both in texture, form, and color, are beyond belief. Were I to write the truth concerning them, I would be thought a Munchausen.

THROUGH THE PARK.

Mounting my "pinto" mare one fine morning, I rode past the terraces and faced southward through the Park. My valise, etc., followed by stage. It was with genuine pleasure that I found myself riding over the old road, past familiar scenes, some of them forgotten, but now easily recalled. I was alone and could ride fast or slow, diverge from the road,

IN YELLOWSTONE PARK.

1. ROCKS NEAR GOLDEN GATE. 2. MINERVA TERRACE. 3. GOLDEN GATE.

cut across the country, muse and reflect as much as I desired. Ahead of me rose Bunsen Peak. I never tire of studying this fine mountain. It is so different in different positions. Where the road turns to ascend Golden Gate Hill, it appears to be ready to topple over upon us. Its steep yellow slopes and high precipices seem to reach up to twice their actual height.

Golden Gate is always the same. Its yellowish cliff, 200 or 300 feet high, with the roadway clinging to it, and the ravine below, never lacks in interest.

And now I ride out into Swan Lake Valley once more. Yes, there is the little lake; beyond are the mountains, Quadrant Mountain, Antler Peak, Mount Holmes, etc., of the Gallatin Range. To the north Electric Peak still casts the shadow of its mighty presence over the upper valley. Whatever changes I may find among the geyser basins, there is at least no change here. All this I note as my mare slakes her thirst at the little stream just beyond Golden Gate. Then we canter down the valley. One thing I note on this day's ride which is emphasized each subsequent day: the young timber is growing lustily. Preserved from fire by the watchfulness of the soldiery, it is becoming an ornamental feature of the roads. I also note that the roads are better, the bridges new, and that trim, white mile-posts tell the traveler where he is every few minutes.

At last I enter a long avenue of trees. The grades and curves are just enough to vary the monotony. At the end of it Obsidian Cliff, the great cliff of natural glass, looms up, and at its base Beaver Lake sleeps as placid as ever. Anon a faint rumbling is heard; light steam-clouds hover in the air, and in a few moments Roaring Mountain is seen high above on the left. Just beyond lie the beautiful Twin Lakes, one a lovely green, the other of rather somber hue. Another avenue of trees through which I canter, and ahead I see on a knoll a white city — a city of tents — and the lunch station at Norris Geyser Basin is at hand.

NORRIS GEYSER BASIN.

I find that there are a dozen times as many springs, pools, geysers, etc., at Norris Geyser Basin as I had previously known. I also learn that the tourists do not see one-half of what they might see, principally because they do not try. The average tourist views simply what may easily be seen as he walks along the road.

It is true that in this way some of the best objects at Norris may be seen. Among these are the Congress Spring, Black Growler, Devil's Inkstand, and Emerald Pool. But if some of the most beautiful springs in the world are to be seen, as well as the new Crater Geyser and the Monarch, the greatest of all here, the tourist must leave the road.

If, after inspecting the Congress, he will cross to the basin on the opposite side of the road, he will presently stand petrified with astonish-

Yellowstone Park Distance Table.

Note.—The figures at the intersection of any two points show the distance between those places.

FROM \ TO	Cinnabar.	Gardiner City.	Mammoth Hot Springs.	Golden Gate.	Obsidian Cliff.	Norris Geyser Basin.	Gibbon Meadows.	Gibbon Falls.	Lower Geyser Basin.	Midway Geyser Basin.	Biscuit Basin.	Upper Geyser Basin.	Keppler's Cascade.	Lone Star Geyser.	Shoshone Geyser Basin.	Shoshone Point.	West Arm Yellowstone Lake.	Yellowstone Lake Hotel.	Natural Bridge.	Mud Volcano.	Crater Hills.	Grand Cañon.	Yancey's.
Cinnabar																							
Gardiner City	3																						
Mammoth Hot Springs	7	4																					
Golden Gate	11	8	4																				
Obsidian Cliff	19	---	12	8																			
Norris Geyser Basin	27	24	20	16	8																		
Gibbon Meadows	30	---	23	19	11	3																	
Gibbon Falls	35	---	28	24	16	8	5																
Lower Geyser Basin	47	44	40	36	28	20	17	12															
Midway Geyser Basin	50	---	43	39	31	23	20	15	3														
Biscuit Basin	53	---	46	42	34	26	23	18	6	3													
Upper Geyser Basin	56	53	49	45	37	29	26	21	9	6	3												
Keppler's Cascade	58	---	51	47	39	31	28	23	11	8	5	2											
Lone Star Geyser	60	---	53	49	41	33	30	25	13	10	7	4	2										
Shoshone Geyser Basin	66	---	59	55	47	39	36	31	19	16	13	10	8	6									
Shoshone Point	67	---	60	56	48	40	37	32	20	17	14	11	9	10	16								
West Arm Yellowstone Lake	75	72	68	64	56	48	45	40	28	25	22	19	17	18	24	8							
						(29	Via	Gr	and	Ca	ño	n.)											
Yellowstone Lake Hotel	94	91	87	83	75	67	64	59	47	44	41	38	36	37	43	27	19						
Natural Bridge	---	---	87	---	---	67	---	---	47	---	---	38	---	---	---	---	19	4					
Mud Volcano	101	---	94	90	82	74	71	66	54	51	48	45	43	44	---	34	26	7	11				
Crater Hills (Hayden Valley)	105	---	98	94	86	78	75	70	58	55	52	49	47	48	---	38	30	11	15	4			
	(39	---	32	---	---	12	Via	No	rris	Ba	sin.)												
Grand Cañon	111	108	104	100	92	84	81	76	64	61	58	55	53	54	60	44	36	17	21	10	6		
						40	(Vi	a M	am.	Ho	tSp	rin	gs.)										
Yancey's	27	---	20	---	---	34	(Gr	and	Ca	ñon	&	Mt.	Wa	shb	urn	Tra	il.)	39	---	---	---	22	
Soda Butte	45	---	38	---	---	--	---	---	---	---	---	---	---	---	--	---	---	57	---	---	---	40	18

ment. On and just below a small hill are many boiling springs. One of these, that might well be called Marble Terrace, is an exquisite creation. It looks like pure white marble, and the etching and chasing along its edges are wonderful. The springs that form it are continually boiling. Rocks and foreign substances that happen to be dropped upon it become cemented to it and beautifully coated. At the foot or base of the terrace is a steam blow-hole. Hard by are boiling springs of lovely sulphur, yellow, green, pearl, etc.

Below these springs, scattered over the formation, are pools of rare beauty. The Minute Man Geyser goes off every fifty seconds, and spouts steam and water to a height of twenty to thirty feet.

The Black Growler — though why it should have been called Black does not now appear — is at the right of the road and below it. It is the only steam geyser, pure and simple, in the Park, so 'tis said. It is a small opening in the hill, about two feet in diameter. Out from this there continually issues a solid column of steam, with a roar that can be heard four miles away. There is apparently never any diminution in the volume of steam, nor any change in the character of the geyser. It would require a score or more of locomotives blowing off steam at the same time to equal the Black Growler in power and noise.

The Monarch is the great geyser of Norris. It has violently burst out of a hillside, and the energy originally displayed must have been tremendous. It is about 300 feet in circumference, and is not unlike a rock quarry in general appearance. The Monarch eruptions occur from two longitudinal craters, sending the hottest of water to a height varying from 100 to 240 feet as it is more or less violent. It is irregular in its action, but plays about every three or four days for an hour and a half.

The afternoon was half gone when I turned my horse's head away from this uncanny spot. I rode on through the Gibbon Meadows, and then turned into Gibbon Cañon. This cañon, high and picturesque, is, in all its sinuosities, full of enjoyment to the traveler. The river itself clear as crystal, the darkish rocks of the cañon, the well-timbered slopes, Gibbon Falls, the springs found at intervals, and the windings of the splendid road, all leave a pleasant impression upon the mind.

After leaving the cañon and mounting to the plateau, a view of the Three Tetons, south of the Park, breaks upon us. These are three of the highest peaks of the Rocky Mountains, and although fifty miles or more away, they stand like mighty giants above all else in this region.

LOWER GEYSER BASIN.

We have now reached that part of the Park where the most peculiar phenomena found there, the geysers, are seen at their best. We had a

foretaste of them at Norris Basin. Here we find them bunched together. Like the deer and antelope in the Park, they are in herds and droves. The first of these localities — for there are three, more or less connected — is the Lower Basin. Here again one's powers of pedestrianism are made available. Near at hand, indeed, are the rare Paint Pots, and a group of geysers and hot pools. But farther away are springs and geysers so much finer that it were a pity to be "so near and yet so far." For the regular tourist it will be a tight squeeze to work these into his programme, unless he is routed out of bed early in the morning.

Of the group *near* the hotel, the Fountain Geyser is the chief, and, whether it be in full play or quiescent, it is a captain. It plays at intervals of about five hours for from thirty to forty minutes. The crater is about 20 x 20 feet, and it ejects large volumes of water to a height varying from fifteen to fifty feet. The eruption is a beautiful one, and more like a large fountain than the typical geyser, if indeed there be one. There are several small geysers and some beautiful hot pools near the fountain. These, with the richly-colored clay Paint Pots, worthy of a careful examination, will serve the tourist a good turn if he does not visit the larger collection. In close proximity to the Paint Pots is the spring that supplies the Fountain Hotel with its hot bath-water. The larger and more distant group of springs and geysers — about a mile and a half from the hotel — extends over a considerable area. They constitute a wonderful collection. The more prominent — if distinctions can honestly be made — are Firehole Lake, the natural hot Swimming Pool, the Pink Dome, White Dome Geyser, Great Fountain Geyser, Surprise or Sand Spring, Firehole Pool, Mushroom Spring, Buffalo Pool, the Five Sisters and others. Of these I can refer specifically to only two or three. Firehole Lake is some 300 feet long by 100 feet wide, and has a small geyser in the center that plays continually, and is called the Steady Geyser. The name of the lake is derived from a peculiar feature of it. From deep down in the north end of the lake, large globes or bubbles of a bluish silver cast are always ascending. On a clear day or a moonlight night, these bubbles, apparently of gas or hot air, appear like a bluish flame, hence the name Firehole Lake. On cloudy days the resemblance is not so striking. It may be, on such days, difficult to discern the bubbles clearly, as the water gives off such clouds of steam.

Buffalo Pool is one of a series of hot springs in the valley of one of the branches of the Upper Firehole River. It obtains its name from the fact that in some manner a buffalo fell into it, and for years his skeleton was plainly seen. Folsom and Cook, who explored the Park in 1869, before the general public even knew there was such a region, saw the remains, including the hide, therein. It is possible to make out the horns

and a few bones in the depths of the pool even now. How the beast became immersed in the pool is, of course, pure speculation. However, it was a royal sepulcher for a royal beast, if it but looked at it in that way.

The Great Fountain Geyser is the mammoth geyser of Lower Basin, and one of the largest in the whole Park. Special efforts are now made to keep a record of its eruptions, so as to advise tourists of them. It appears to play with moderate regularity every eight to eleven hours, throwing water and steam to a height of from 60 and 75 feet to 150 feet. Before eruption and just previous thereto, it gradually fills both of its basins — an inner within an outer one — to overflowing, and when the drainage begins to seek the various outlets the display may be looked for. It comes suddenly, first boiling furiously, then becoming quiescent. The outburst comes violently and lifts an enormous mass of water from the whole pool, some fifteen feet in diameter. The eruptions follow each other quickly at first. It then takes matters more leisurely, and alternately, boils furiously and throws out its seething contents for an hour and a half. The first three expulsions are usually the finest. Some of them are very violent, and the mixture of water and steam and the variety of effects produced are beautiful beyond description. Between its convulsions, after a time, one can walk out on the formation and look down into the throat of the monster. The crater and the entire formation are white, and are exquisitely beaded and fretted.

For those who prefer to ride, the Transportation Company runs a tourist wagon from the hotel at time of eruption, for a moderate charge.

MIDWAY AND UPPER GEYSER BASINS.

The tourist spends the day following arrival at the Fountain Hotel in visiting the Midway and Upper Geyser basins. Spending an entire day at the Lower Basin, I cantered over to the Upper Basin in the evening. En route I visited the Midway.

The new bridge over the Firehole River enables the coaches to set their occupants down right at Excelsior Geyser. This is as it should be. This spot was once known as Hell's Half Acre. The tourist will be apt to think it savors of heavenly rather than hellish regions. Still, when one thinks upon what the eruptions of Excelsior must have been, he will forgive those who named it for thinking that it must have been closely connected with the locality now known as Hades.

There is so much steam arising from the three lakelets here, that it is difficult to obtain a satisfactory view of them. In order to do this it is necessary to walk to the very edge and peer out through the vapors. The wind shifts them, more or less, so that glimpses may be obtained of pools whose loveliness is scarcely matched elsewhere. One must, however, be careful. The walls around Excelsior, in particular, are

juvenile cliffs. At some places they are eaten out underneath and shelve back under the surface, leaving but a thin shell to walk upon.

Prismatic Lake is the largest of the springs found here, and is a rare jewel in a land of jewels. It is a regular kohinoor of its kind.

Biscuit Basin, between Midway and Upper Basins, contains some of the purest gems found in the Park. It requires a special trip across the Firehole River to see it in its entirety.

Among many, the Avoca, Cauliflower, and Sapphire are worthy special notice. The Sapphire Pool is one of the half-dozen most beautiful pools in the Park. This is saying a good deal. It is, however, in the front rank with Prismatic Lake, Morning Glory Spring, Sunset Lake, and Emerald Pool of the Upper Basin. The water of the Sapphire is a glorious sapphire in color, very deep, and the pool is about fifty feet in diameter, circular in shape. Its rim is ornamented with dark gray geyserite biscuits. When it plays it boils violently, and the effect is not unlike that of the propeller of a steamer as it churns the water. The cliffs under water are clear white, projecting out at places into the pool.

As I cantered on toward the Upper Basin the raindrops began to fall. I hurried on to get under cover, and we rushed past the Grotto, Riverside, Giant, and other geysers in the lower part of the basin, all of them sound asleep. From afar Old Faithful espied me, and, recognizing an old friend, trumpeted a salute in his hearty, royal fashion, welcoming me again to his presence. Within fifteen minutes the Bee Hive, not to be outdone in hospitality, did the same, and altogether I felt that I had a *warm* welcome.

The curious geyser phenomena are best seen at Upper Geyser Basin. Here is where Old Faithful, the Splendid, Grand, Lion and Lioness, the Giant and Giantess, Bee Hive, Grotto, Castle, and others, the greater and lesser, are seen. Wonderful fountains they are. Many a man will be carried back to his boyhood days when rival fire engines in their trials of power were the delight of the small boy.

This basin is a little more than one mile long by one-half mile wide, with an annex, Black Sand and Sunset basins, and it is, of its kind, the most lively and eccentric spot known. There are about a dozen geysers here that throw steam and water to a height of 100 to 250 feet, while there are a couple of dozen more that play to varying heights under 100 feet. Some of these frisky things perform their antics at intervals of a few minutes, others a few hours, and others rest for days after each effort. Old Faithful sends its enormous volume aloft punctually every hour, and as it plays to 150 feet, it furnishes a standard for the imagination to picture what the other fellows can do.

The most powerful geysers are close to the river and on both banks. Numerous foot bridges afford easy access from side to side. So much hot

water is ejected by these imaginary creatures of a Dantean world, that the Firehole River is always of a high temperature. And yet, delicious trout are caught in these warm waters.

COMPARATIVE TABLE FOR 1894 AND 1895 OF ERUPTIONS OF GEYSERS IN UPPER GEYSER BASIN.

GEYSERS.	ERUPTIONS — 1894.			ERUPTIONS — 1895.		
	IN FEET	DURATION.	INTERVALS.	IN FEET	DURATION.	INTERVALS.
Old Faithful	150	6 min.	65 minutes	150	7 min.	70 minutes
Bee Hive	200	8 "	5 times a week	200	10 "	4 to 8 times a week
Giantess	125	10 to 20 hrs.	14 days	125	10 to 30 hrs.	7 to 10 days
Lion	75	10 min.	10 to 20 hours	75	8 " 14 min.	Daily
Lioness	100	12 "	24 to 48 hours	100	12 "	Irregular
Cub's	10 to 30	20 "	Frequent	10 to 30	30 "	Frequent
Surprise	60	30 "	Irregular	60	30 "	Irregular
Saw Mill	25	30 "	Very frequent	25	30 to 60 "	Every 2 hours
Grand	200	30 "	15 to 20 hours	200	30 " 40 "	12 to 30 hours
Turban	30	30 "	Several times a week	30	30 " 50 "	15 to 30 hours
Riverside	90	15 "	8 hours	100	20 "	7¾ hours
Fan	30	10 "	8 hours	30	12 "	3 hours
Artemesia	100	10 "	Twice a day	100	12 "	Daily
Jewell	40	2 "	Irregular	40	2 "	Very frequent
Grotto	25	25 "	4 hours	20	30 to 60 "	4 hours
Giant	250	90 "	5 days	250	90 "	3 to 5 days
Oblong	20	4 "	6 hours	20	4 to 8 "	6 hours
Splendid	200	8 "	Every 3 days	200	20 "	Every other day
Castle	100	50 "	20 to 30 hours	100	50 "	16 to 30 hours
Economic	30	1 "	Frequent	30	1 "	6 minutes
New				30	3 "	7 minutes
Comet	100	10 min.	3 times a week			
Bonita	25	8 "	Frequent	25	8 min.	Frequent
Mortar	40	10 "	8 hours	40	10 "	3 hours
Daisy				100	8 "	4 times a week
Sapphire	25	20 min.	2 hours	25	20 "	2 hours
Spasmodic				50	10 "	Irregular
Spitfire				15	20 "	Daily
Mugwump	10			10	15 "	10 minutes

As the stage reaches this basin, if several of the geysers are playing at the same time, or in quick succession, one is quite likely to become confused. The people pour out of the vehicle and rush in all directions. Shouts and exclamations are heard, arms waved and excitement is high. A lean wife goes scudding away at full speed, apparently to corral one of the geyser streams, followed by a fat husband on a stern chase, puffing and blowing. Some one will start pell-mell for one spot, and seeing another geyser break forth elsewhere, turn short and make for it, and probably lose both, so far as a close view goes. The younger element scream and stamp and are beside themselves.

The variety of display exhibited is remarkable. During the two days I spent at the Upper Basin I saw a dozen geysers play, and there were no resemblances in common to speak of.

It is a pretty difficult matter to decide that any one geyser is superior to all the others. Among those I have seen, if compelled to decide such a question, I should rather incline to the Bee Hive. The Grand gives a

magnificent exhibition, however; so does the Splendid. Two eruptions of Old Faithful that I saw early on a frosty morning, no man could have seen and not been stirred to the depths.

The Bee Hive, however, plays in a manner utterly unlike any of the rest. Its funnel or crater is peculiar, resembling an old-fashioned bee hive, and the interior is about two feet in diameter. I witnessed two of its finest displays, one from the lunch station porch, the other standing at its very edge. This geyser has an indicator, a small hole in the geyser formation near by. This boils regularly about thirty to thirty-five minutes previous to eruption. By taking its temperature it can be quite accurately determined when the time is at hand.

There are none of the preliminary retchings and bellowings in connection with the Bee Hive's performance. Only the slightest warning and then the water and steam go sailing straight up for 100 and 150 feet and more. The stream is a most symmetric and imposing one, gradually expanding equally from its center as it rises. Fifty fire engines with their streams combined, and the nozzle thus formed, elevated straight toward the zenith, might, to a degree, imitate it. There is no swaying, no surging in the great column; it shoots up to its farthest limit a solid white shaft of water and steam. The roar of the geyser is loud and, like the Black Growler, resembles a mammoth engine blowing off steam. The grand display continues about ten minutes, the steam predominating in quantity the last half of the period. It gradually subsides after ten minutes, and once through is perfectly quiet. One can stand against the cone itself, during eruption, and pass the hand rapidly across and through the water column without danger of scalding. This I saw done.

Some of the geysers have built up cones. Many of these, like those of the Giant, Grotto, and Castle, are broad and high, almost fantastic. Others, like the Grand and Splendid, have none whatever.

After lunch at the Upper Basin the tourist wagon makes the round of the region, charging a reasonable fee. Black Sand Basin, and Sunset Basin an area on Iron Creek, just west of, and considerably lower than, the Upper Basin proper, are first visited. Let no one forego this trip. A view of the Devil's Punch Bowl, Black Sand Pool, Sunset Lake, and Emerald Pool will be recalled forever. Even after having seen pools and springs and lakes until one thinks he has had a surfeit of them and been left impressionless, he will stand in open-eyed wonder at what this modest little valley reveals. I shall not attempt a description further than to say that beauty itself must be jealous when it silently stands beside these immaculate waters.

The White Pyramid is a white, cone-shaped mound, probably an extinct geyser, in the lower part of the Basin proper. It is near the Splendid Geyser, and a very prominent object.

M O N T A N A
PORTLAND
Helena
Butte
Logan
Bozeman
Livingston
YELLOWSTONE
Billings
Custer
Ft. Keogh
Miles City
Glendive
NORTHERN PACIFIC R. R.
TO ST. PAUL
N. P. R. R.
Cinnabar 5,300
Sepulchre Mt.
Electric Peak 11,155
Sheep Mt.
Mammoth Hot Springs Hotel
MAMMOTH HOT SPRINGS 6,015
Mt. Everts 7,900
YELLOWSTONE
Garnet Hill
Bison Peak 9,038
Barronett Pk. 10,398
GALLATIN RANGE
Quadrant Mt. 10,200
Sheepeater Cliffs
Yancey's Camp
Junction Butte
Petrified Forest
Fossil Forest
Cabin
Mt. Norris 10,019
Antler Pk. 10,200
Prospect Pk. 9,300
Folsom Pk. 9,200
Mt. Holmes 10,300
Apollinaris Spring
Crystal Spring
Obsidian Cliff
Lake of the Wood
Mt. Washburne 10,000
Amethyst Mt. 9,423
SPECIMEN RIDGE
Duncaven Pk. 9,700
Hedges' Pk. 9,500
Norris Hotel
NORRIS GEYSER BASIN 7,200
YELLOWSTONE RIDGE
Canon Hotel
Lookout Pt.
Upper Falls 109 Ft.
Lower Falls 308 Ft.
GRAND CANON
Elk Park
Hot Spring
Violet Springs
Crater Hills
Beryl Spring
Gibbon Falls 80 Ft.
Hot Sulphur Spring
Mary's Lake
Madison River
SULPHUR HILLS
Pelican Hill 9,600
Mud Springs and Geysers
Mud Volcano
Pyramid Pk.
Cathedral Pk.
Fountain Hotel
LOWER GEYSER BASIN
Fountain Geyser and Paint Pots
ELEPHANTS BACK
Lake Hotel
Cliffs
Mt. Chittenden 10,100
Silver Tip Pk.
Twin Buttes
MIDWAY GEYSER BASIN 7,140
Excelsior Geyser
Fairy Falls 250 ft.
Natural Bridge
Pelican Roost
Stevenson I.
Lake Butte
Avalanche Pk.
Outlook Pk.
Grizzly Pk.
ROCKY MOUNTAIN DIVIDE
CONTINENTAL DIVIDE
UPPER GEYSER BASIN 7,080
Old Faithful
Shoshone Pt.
Bluff Pt.
Carrington's I.
Breeze Pt.
Dot I.
Park Pt.
YELLOWSTONE LAKE
Kepler Cascade
Morris Punch Bowl 7,350
Lake View
Two Ocean Pond
Lunch Station
West Bay or Thumb
7,741 ft.
SIGNAL HILLS
Mt. Doane 10,500
Mt. Stevenson 10,600
Mt. Langford 10,600
Mt. Schurz 10,900
Mt. Humphreys
Colter Pk. 10,500
Turret
Bear Park
Grant's Pass
7,740
Frank I.
LAKE
Molly I.
Lily Pond
Pots
Madison Lake
SHOSHONE SILVER BASIN
SHOSHONE LAKE
Delusion L.
Flat Mt. Arm
South Arm
South East Arm
Riddle L.
Flat Mt. 9,000
PITCHSTONE PLATEAU
Hot Springs
Lewis Lake 7,730
Heart Lake 7,400
Geyser Basin
ROCKY MOUNTAIN
Mt. Sheridan 10,200
RED MTN. RANGE
Barlow Pk. 9,500
MOUNTAIN
DIVIDE
THE TRIDENT
Mt. Hancock
Bridge Lake
Scale of Miles.
0 1 2 3 4 5 6 7 8 9 10
WYOMING
Rand, McNally & Co., Chicago.

R.M&N-CO CHI.

IN YELLOWSTONE PARK.

1. GIANT GEYSER.

2. OLD FAITHFUL GEYSER.

YELLOWSTONE LAKE.

The fourth day's ride extends from the Fountain Hotel to the Yellowstone Lake Hotel. The transition is a great one. The ride itself is a grand one. The country becomes mountainous, with lovely parks and glades among bunches of timber, and at the end of all a resting spot, overlooking a mountain lake twenty by sixteen miles in size, bordered by mountains nearly 11,000 feet high. It is a most beautiful picture, and such a pleasing contrast to the spewing, noisy geyserdom just left, that it lulls one to rest and repose, not in the cradle of the deep, but amid the quiet of God's holy hills and the murmuring breezes that ruffle the lazy lake.

After lunch at the lunch station at the west arm of the lake, the wonderland tourist continues by stage to the Lake Hotel. Numerous Mud Pots, Springs, etc., will be passed, and the changing views of the lake will be most interesting. Sometimes he will be high above it, again at its very edge. Now, the eastern shore of the lake with its high mountains will be the background, and, after a few miles, Mount Sheridan, away down in the south, will rise before him, with the mighty Tetons, white-capped with snow and farther away, lording it over everything in the whole country. A small steamer plies between the lunch station and the Lake Hotel. This, however, has *no connection* with the regular Park tour, and an extra fare is demanded for the ride.

When at the Lake Hotel, go out in the evening and see how voracious Yellowstone Lake trout are. The next morning rise early and ride out to the Natural Bridge, some four miles away. If you enjoy angling you will appreciate the sport, and the bridge is really a curiosity.

Again the scene changes. Onward, by the side of the proud Yellowstone River; on past Mud Volcano, ever seeking to relieve itself of its noisome, grewsome, roily mud; across Hayden Valley, the retreat of thousands of buffalo, elk, deer, etc., during the winter's reign; past Crater Hills, with that wonderful Chrome Spring; through the cañon-like defile by the side of the rapids above the falls, climbing the long hill until the great hotel at the cañon is reached, and the grandest sight of the Yellowstone Park lies at our feet. This is the culmination of the tour — the final act of the drama, the climax of the sermon, the dessert of the feast — a wondrous unfolding of the glories and powers of God and nature; or God working through nature, if you like that better.

THE GRAND CAÑON — THE FALLS.

Have you ever covered your head with the cloth and peered through the ground glass of a camera set up out of doors? If so, you have noticed how every color and detail of the landscape was brought out on the glass. Just after the stage-road crosses the Crystal Falls bridge, it ascends a

long hill leading to the hotel. For a minute or two during this ascent, the occupants have a view of the Grand Cañon. If the day be warm and the sun shining brightly, one will think it a vision. It seems as if the rays of every rainbow that has spanned the cañon, the iridescence of every sunset that all these centuries has set over the region, had been caught and transfixed forever upon the walls of the cañon in startling brilliancy, even as the ground glass of the camera catches so vividly, for the time, the colors of the landscape within its field.

There is nothing truer than that continuous sight-seeing wearies one. What a commentary, therefore, upon this cañon, that, after five days of rapid and unending *reconnoissance*, a sight of it rouses the flagging mind and enthuses the beholder!

It is much for one to simply see the cañon as the regular Park tourist sees it, having a part of two days. It is infinitely more to be able to spend several days in a study of it. What a place for one to spend a vacation! What a variety of landscape is concentrated in a given area! The Cañon itself, the Lower and Upper Falls, the river with its unrivaled trout-fishing, the tarns and lakes among the hills, Dunraven Peak and Mount Washburn to climb, the Tower Creek country to explore, Hayden Valley with Crater Hills to ramble over — here are variety and exploration enough to tempt one in search of pastures new, and health and recreation. And one need not go alone. Guides can be hired, or there are those always at hand ready for a ride or jaunt. The soldiers—stationed at each important point—are always patroling in various directions. They will be glad to have the stranger within the gates ride and climb with them.

THE UPPER FALLS.

Unfortunately it is not easy to obtain the best view of these falls, as falls simply. It is necessary, in order to get a full face view of them, to cross the river, which is not an easy thing to do for the average tourist, as there is no bridge.

Perhaps as good a view as any is from near the head of the trail leading down to the Lower Falls. This trail leaves the main road at the point where the latter begins to climb the hill upon which the hotel is built. There is a large rock to the right of the trail going down, and from it the falls are visible — only a suspicion of them though, a large, jutting rock of lava at the falls itself hiding most of them. But the picture presented is a beautiful one. The trees around and above, the black rocks, the cañon through which the eye sweeps, all make an effective *tout ensemble*. The foamy water of the cataract as it strikes the river below is white as snow. The basin into which it drops is high and gloomy. The rebound of the water is from ten to thirty feet,

and it leaps halfway across the cañon. The wind whips it around as it pleases, and the mist-clouds float away to the top of the surrounding walls, keeping them damp and moss-grown. As the trail is descended, more of the cataract comes into view, and the churning effects at the bottom of the gorge are better visible.

THE LOWER FALLS.

In a good many years of sight-seeing in the West, I have found it quite unsatisfactory to make comparisons. There is usually some important factor in connection with one of the members of the equation absent from the other, that renders the comparison valueless. There are in the United States several large and now well-known falls. Four that constitute, perhaps, the greatest quartet are Niagara, Shoshone in Idaho, the Yosemite, and the Great, or Lower, Falls of the Yellowstone. Of these the only two that it seems possible to couple, comparatively, are Niagara and Shoshone. And these are so entirely different in important characteristics as to render it senseless to attempt it. None of them can honestly be compared with the Yellowstone for the same reason. Nor is there any need of it. They are all great, beautiful, grand, powerful, each in its own way.

The height of the Lower Falls is given in old guide-books as 360 feet. This was supposed to be correct twenty years ago. Careful measurements by the United States Geological Survey proved that 308 feet was their correct height. In the same way the Upper Falls have been estimated at 140 and 150 feet, when they really are 109 feet high.

The depth of the cañon is wildly stated at from 1,500 to 2,500 feet, when the truth is that 1,200 feet is the maximum height of the walls. Neither the falls nor the cañon need exaggeration in any respect, and we may as well be truthful about it.

At the very edge of the Lower Falls there is a platform, well railed, from which the falls may be seen in all their glory from this position — looking down upon them.

As the water, green and clear, plunges over the brink it becomes a mass of spray and foam, white as the driven snow. At times I have seen on the left side of it — the side upon which the platform is built — a green ribbon, gradually growing fainter, stretching down, seemingly, for one-fourth the height of the falls.

There is a fascination in simply standing and watching the falls. Now one feature presents itself strongly, then another. For those who can do it, to lean over the rail and watch the fearful mass as it goes tumbling down, will prove intensely fascinating. There is a slight ricochet, or outward bound, at two or three places, from the face of the precipice.

The first, and perhaps the most lasting, impression that comes to one in looking upon the falls from this position is force, power. The sight of it as it goes over the cliff; the rebound as it strikes the bottom of the chasm; the loud, never-ceasing roar, each and all drive home the idea of crushing, pulverizing force. As the water strikes the bottom it sends up a mighty cloud of spray and vapor. This shifts about, rises and floats along the upper cañon walls, and is carried by the wind some distance down the cañon before it dissolves. On a cloudy day this vapor keeps the walls damp, and the brilliant effects otherwise seen are wanting.

THE GRAND CAÑON.

What shall I say of it — what can I say, when anything said is weak and impotent in comparison with the thing itself? It tells its own story as no one else can tell it. No rhetoric can convey to your mind any real idea of it. This you will ascertain the moment your eye rests upon it. The best that can be hoped for in such a strait is that something may be said that will implant in the mind a longing to go and see.

Within a year the roads in the neighborhood have been changed and put in fine condition. Coming from Yellowstone Lake the road now runs along the bank of the stream by the side of the rapids and Upper Falls. From the hotel the road leading down the cañon has been reconstructed, good bridges built, and side trails made to the vantage points for seeing the cañon. This road now extends clear to Inspiration Point, and is carried along the very brink of the cañon wherever possible.

There are many places where superb views are obtained. Nearest to the hotel is Lookout Point, and farthest away of points usually visited by tourists is Inspiration Point. Between these are a number of promontories and projections, some named, others unnamed. The most striking of these is Grand View, and grand it is in every sense of the word.

If the enthusiast wishes to get a sight of the cañon much different from any other, and in the opinion of many the finest obtainable, he should go beyond Inspiration Point. The Lower Mount Washburn trail leaves the road near Inspiration Point. There is an enormous boulder right at the intersection, of which more anon. Follow this trail for a mile perhaps, and a projection will be noticed leading well out into the cañon. From this crag the walls are emblazoned with every color or combination of colors that are probably to be found anywhere in the cañon. It is perhaps less brilliant than the magnificent array found at Grand View. In each case it is a cañon view pure and simple. The Lower Falls, so conspicuous a factor of the landscape from both Lookout and Inspiration Points, do not appear in either of these.

I have mentioned a boulder at the junction of the main road and the

Washburn trail. This boulder is worthy of inspection by the tourist. It is of granite, 18 feet high and 24 feet long by 20 feet in breadth, dark in color. It was transported from its native heath by a glacier and deposited where it now lies when the glacier receded. Mr. Arnold Hague of the United States Geological Survey states that the nearest point from whence it could have been torn is at least thirty or forty miles distant.

To thoroughly appreciate, yes, I will say to fall in love with the cañon, one must needs see it under different conditions. See it when the sun is flooding it with noonday radiance; when the winds sweep the masses of vapor through it, deluging its walls with moisture; when the sun is vanished from earth and evening's shadows slowly creep from crag to crag and base to summit. To look upon the cañon when in the full glare of the sun, one would never realize what a softness and mellowness comes over it when the clouds hide the golden orb.

I had seen the walls under varying lights and shades, but upon this occasion I saw it in a new dress. It had snowed somewhat during the night. When I reached the road at the cañon brink, everything seemed transformed. The trees were cottoned over with snow, the road was a white avenue, the rocks were whitened. But the cañon itself — what a change had come over it! The sun, of course, was invisible. The heavy masses of foliage that on either side crown the precipice with a ribbon of green were powdered with snow. The crevices and moderate angles of the walls wore a soft mantle of purest white. The other parts of the cañon were gently sprinkled with the fleecy material. The leaden clouds hung in parallel ridges above the gorge. Nature was in exquisite attire, and how softened! I wouldn't have missed it for a good deal.

It is interesting to know something about the age of such things as the Grand Cañon. Unfortunately it is difficult to obtain satisfactory statements on this head. Geologists fight shy of positive assertions, especially when it comes to specifying years. They do not deal with years, but with epochs and centuries. Even then they hesitate to make definite statements of this sort. Nor is it to be wondered at, for mystery and doubt form a black atmosphere about them.

The gorge of Niagara River is about seven miles long. The time required to excavate it has always been a fascinating theme for scientific minds. I have before me a pamphlet on this subject. The estimates vary from 3,500 to hundreds of thousands of years, and all based on substantially the same facts. Mr. G. K. Gilbert, one of the ablest geologists of the country, writes, in winding up his discussion: "For myself, I am disposed to agree * * * *. that no estimate yet made has great value, and the best result obtainable may, perhaps, be only a rough approximation."

The Grand Cañon that the Yellowstone has excavated is twenty miles long. As I understand it, the materials out of which it has been cut are very hard, and the Niagara gorge is worn through soft strata. In the case of the Yellowstone, the hot water, steam, and chemical action have perhaps modified the hardness of the material. It would seem that if the Niagara Cañon, through limestone and shales, required hundreds of thousands of years to excavate it, that it must have taken hundreds of millions, or even hundreds of billions, of years for the Yellowstone Cañon to reach its present dimensions. But it is too large a subject for laymen to discuss when the doctors can not agree.

HOMEWARD BOUND.

I remained at the cañon two days. Early in the evening of the second day my faithful mare and I began our return journey. The air was moist, though not cold, and the snow lingered among the tree-tops and at the roadsides. This, in connection with the solitude, which I rather enjoyed, made my ride to Norris Basin a delightful one. The road descends and retraces the Cañon Hotel Hill, past Crystal Cascade, then turns west and circles up the hill. After the top of Solfatara Plateau is reached, it runs straight west through an avenue cleft through the trees, to the Gibbon River. It is one of the best roads in the Park for an evening ride, and as the mare cantered along I entered thoroughly into the enjoyment of it.

After supper at Norris, Larry—in charge of the lunch station—and I went out and made a twilight exploration. We splurged about through hot pools and among steam-clouds that filled the atmosphere. Larry piloted me rapidly here, there, and everywhere, keen as a hound on the scent. It was a queer contrast to the basin at noonday—naught but the bellow of the Black Growler and the spasmodic piping of a smaller geyser or two was heard.

The next morning — September 21st, almost the end of the tourist season — there were five inches of snow on tents and ground. After breakfast I started on the last stage of my horseback ride. It was somewhat cold, though not severely so. The wind was directly in my face, and keen and cutting. The beautiful avenues were now more beautiful than ever. Not a spot or track sullied the fresh purity of that snowy way. The trees were bending under their powdery load. I was riding in a new world — through a beautiful avenue of Christmas trees. There were millions of them, of all sizes, and enough to supply every home in the land. Once I thought I had stumbled upon old Santa Claus sure enough. A nearer approach showed me that it was a shaggy spike elk browsing among the trees. Away he trotted when he saw me.

I rode eight miles, to Obsidian Cliff, before meeting a human being

or seeing a track other than that made by my own beast. Here I met Mr. Huntley of the Transportation Company making a round of the Park, and soon afterward an ingoing stagecoach loaded to the guards passed me. *That* stage-load of tourists saw some sights in Wonderland that day not usually seen by tourists.

SIDE TRIPS IN THE PARK.

From Mammoth Hot Springs there are many side excursions that can be made. A day at any of the trouting streams within a few miles will be a recreation. A climb up Terrace Mountain afoot, or a ride up the east fork of the Gardiner River to the head of the cañon beyond Undine Falls, and then ride back over the entire length of Mount Everts, will prove pleasant trips. These are suggestive of many others of the same sort. The best outing from here, however, is one that will take three days, or more if desired. Ride over to Uncle John Yancey's, as he is familiarly called, and from there, as headquarters, explore the East Fork of the Yellowstone region. This means to visit Tower Creek and Falls, Specimen Ridge and the Fossil Forests, Soda Butte Creek, and catch trout in the Yellowstone River, where it is said the best trouting in the Park is found. I put in two days on this trip and could have used a week.

From the Fountain Hotel a horseback trip can be made up Nez Percé Creek to Mary's Mountain and Lake and into Hayden Valley. At the head of Alum Creek, on the eastern slope of Mary's Mountain, Captain Anderson constructed, in 1895, a corral covering a square mile of territory and costing $3,000. The Smithsonian Institution at Washington furnished the funds for it. The object is to corral and capture the buffalo that winter in this locality, so as to retain in a natural state as many as possible.

If a little roughing it is desired, outfit a pack animal or two and go down to Shoshone Lake and Geyser Basin. This will give one a touch of the wilderness and unkempt nature. Two or three days will suffice if so desired. Through the kindness of Captains Anderson and Scott I made this trip with two soldiers. We went in by the way of Lone Star Geyser and Shoshone Creek. There is interminable forest and fallen timber at many places, but it is always possible to worry through. It is a grandly wild region and full of elk and moose. The night we camped out we were in a regular herd of elk. They whistled and squealed all night long. So great was their curiosity that they nearly walked into our tents, until the sergeant's dog got tired of it and pitched out at them. That satisfied them. We followed around two sides of the lake, forded the Lewis River between Shoshone and Lewis lakes and came out at the lunch station at the west side of Yellowstone Lake.

From Yellowstone Lake Hotel there is a wide scope of country to

choose from. The Pelican Creek region, the mountains east of the lake, and boat trips about the lake itself offer an inviting field. Hayden Valley can also be explored from this point. I visited Captain Anderson's Buffalo corral en route from the lake to the cañon.

From the Cañon Hotel, Mount Washburn, Dunraven Peak, etc., can be climbed. There is a trail leading to the summit of Washburn and a horse can be ridden every foot of the way. The view from the peak — which is 10,000 feet high — is wide-spreading. Electric Peak and Cinnabar Mountain to the north, and the Tetons to the far south, are in sight. The Grand Cañon is not visible, being curtained by the amazing thickness of the timber which covers everything. A shoulder of Mount Washburn, nearly 9,000 feet high, overlooks the cañon, and the lower Mount Washburn trail runs directly to it. If preferable, the excursion to Yancey's, outlined from Mammoth Hot Springs, can be made by returning to the springs from the cañon, via Yancey's.

Captain Anderson has outposts at many places in the Park, away from the roads. These stations will furnish convenient points for rendezvous when out riding in this way. The soldiers are conversant with every square mile of the Park, and are glad to give all information in their power. When possible, they will also act as guides in an emergency.

For a summer's outing, be it one week, one month, or an entire season, the American people have no finer spot than their world-renowned Park.

GLACIERS.

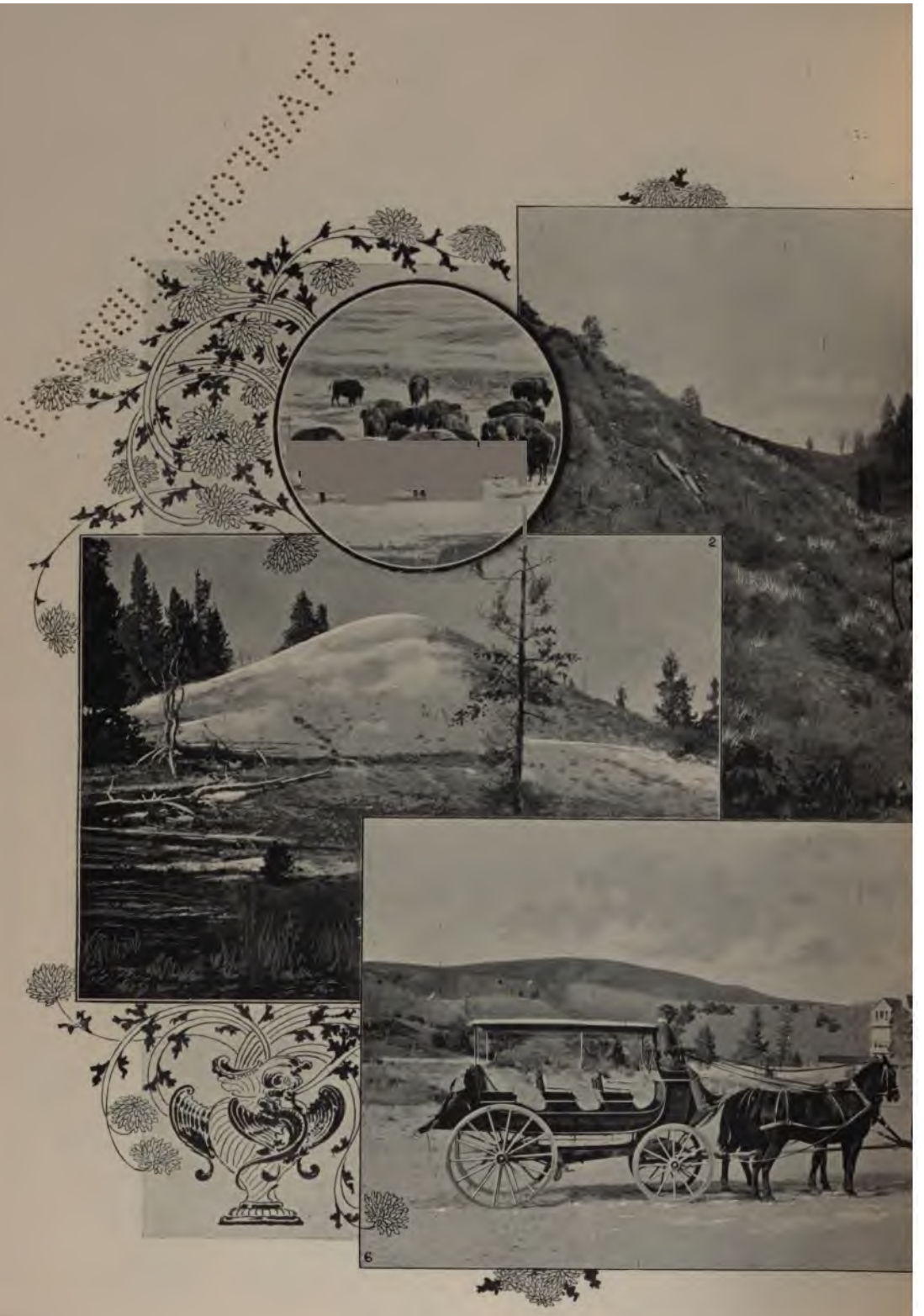
In 1885 Mr. Charles T. Whitmell of Cardiff, England, in a paper read before the Cardiff Naturalists Society, said, regarding the Park: "Were there but a living glacier * * * * and an active volcano, the cup of wonders would be full." The volcano is yet to be found. The glacier is there, was there when Mr. Whitmell made his address.

About eleven miles southeast of the Hoodo Basin, between Stinkingwater Peak (11,600 feet high) and Sunlight Peak (11,977 feet above sea-level), the United States Geological Survey found a large glacier, or, indeed, a series of them. They gave to it the name of Sunlight Glacier. It is more than a mile across. The surface is crevassed with walls of clear green ice, and it has a typical terminal moraine. It is deep within the mountains, and in the summer of 1895 Col. W. S. Brackett of Peoria, Ill., and others saw it from a distance. Residents of Montana have also seen it. While it lies just outside the limits of the Park proper, it is, notwithstanding, part and parcel of the wonders of the Park region. It is difficult of approach, owing to the rough character of the country.

There are glaciers in the Bear Tooth Range, south of Red Lodge, east of the Park, and several on the Three Tetons, just south of it.

SCENES IN YELLOWSTONE PARK.

GREAT FALLS OF THE YELLOWSTONE. GRAND CAÑON OF THE YELLOWSTONE. MUSHROOM ROCK.



1. A BUNCH OF BUFFALO. 2. THE WHITE PYRAMID, UPPER
5. EAGLE ROCK AND GARDINER'S RIVER.

RK.

3. PETRIFIED TREES, NEAR YANCEYS. 4. ELK IN WINTER.

6. A *WONDERLAND* STAGE-COACH.

4
6

HUNTING THE WHITE GOAT.

I DO not care to sail under false colors. I can hardly claim to be a sportsman. True, during many years of mountaineering a rifle hung over the horn of my saddle. My work allowed no time, however, for hunting, and while I had two or three, to me, interesting episodes, they were caught on the fly, as it were. During those years I saw bear, deer, antelope, mountain sheep, mountain lions, and coyotes. Elk and moose had not come my way, and we were never in a mountain-goat country. When, therefore, the opportunity presented itself of embarking in an expedition into a mountain region where these three game animals might be seen, I embraced it. Not that I expected to do any great execution myself. I didn't. But I did desire to see these noble animals in their native wilds and have a scramble after goats, that hermit breed of the high altitudes. If we found them, I might see some one else knock them over, if not lucky enough to do it myself. And that was just about the way it turned out. Time precluded our penetrating as deeply into the recesses of the range where the game had been less hunted, as we otherwise would have done. We were fortunate in procuring a very prince of guides and hunters in the person of Mr. Wm. H. Wright of Missoula, Mont.

One of the principal sub-ranges of what are popularly known as the Rocky Mountains, is the Bitter Root Range. This range extends from Lake Pend d'Oreille, in Northern Idaho, southeastward, its ragged and sinuous summit line forming the boundary between Idaho and Montana. It is a high, cold, storm-swept range. Its lower flanks are densely timbered, its upper altitudes barren of verdure, the abode of the clouds and the lightnings. It is grand, wild, and precipitous. Since clambering among its gray, gloomy solitudes, I am convinced that, if ever the boundary line among its crags and pinnacles is meandered, it will have to be done by an engineering corps of its own Rocky Mountain goats educated for the purpose.

From earliest time this range of mountains has afforded some of the finest hunting on the continent. The difficulty of penetrating its inmost defiles has prevented any, save those willing to encounter much hardship, from attempting to thread its tremendous cañons. The result is that

to-day no mountain district excels it as a large-game preserve. In 1882 William A. Baillie-Grohman, the well-known mountaineer and hunter, spent some time hunting the white goat in these mountains. In recounting his experiences in the *Century Magazine* for December, 1884, he states that, after reaching the foot of the range, it required the most laborious efforts for four days to reach the divide. It isn't as bad as that now. From the Bitter Root Valley there are three cañons through which the heart of the range can be reached. While the trails are rough, there are none of them over which a pack-train can not be taken. It will still take from two to three days to reach the best hunting grounds, depending upon the point for which one is aiming.

We reached Hamilton, Mont., about two hours' ride up the Bitter Root Valley from Missoula, on the evening of September 23d. This is the largest town in the valley, save Missoula, and an important lumber-shipping point. It is virtually the terminus of the Bitter Root branch of the Northern Pacific Railroad, which continues on to Grantsdale, four miles farther. At Hamilton, and at Ward's ranch, some fifteen miles south, we gathered our pack-train and completed our outfitting.

The morning of September 26th found us following the trail along the base of the range. It was a glorious park-land. Low, rounded hills that were probably once at the bottom of a vast lake, supported lofty pines, whose bronze-red needles formed a carpet for our horses' feet. Off to the southwest, three sharp, tooth-like peaks towered high above their fellows. For several miles our route led thus, to the mouth of Lost Horse Cañon.

There were four of us, with five pack horses to carry our "grub" and camp luggage. First came Wright, who knows, apparently, every foot of the cyclopean range "from Dan to Beersheba." Dr. A. A. Law, my young friend and Nimrod Esculapius from Minneapolis, was started on his first tussle for big game in the mountains, and splendidly he acquitted himself; Heavilin, a man of all work, and the writer completed the human contingent.

The trail through the cañon is very rough. It is well worn and comparatively but little obstructed by fallen trees. As such trails go there is nothing of which to complain. The walls of the cañon are in all cases steep, in many cases absolute precipices, unscalable. They range from 1,800 to 2,500 feet high. These palisades over which the water trickles, giving them a glistening appearance like silver, are gray in color. Fortress-like and castellated rocks and crags pierce the sky at the cañon's brink. The greater part of the cañon, both above and below, is robed in green. At places the trees are crowded out, but they make a gallant fight and grimly grasp at the skirts of the cliffs with their long, green, tapering fingers.

The distinctive feature of this cañon was the amount of slide-rock

encountered. This seems true of all the Bitter Root cañons. By slide-rock is meant the rocks and boulders that are brought from the higher walls of the cañon by snow-slides, or that are dislodged from the cliffs by the action of water or frost. These avalanches have been terrific. Their paths are marked by a scraping away of all vegetation from the cañon's brink to the water's edge. Narrow at the top, they gradually widen, fan-fashion, until at the bottom they are usually extended over quite a wide area.

In some cases the force of the avalanche has been so great, that some of the trees and debris have been carried across the stream and some distance over the opposite slope. Not all the slides carry such great quantities of boulders. Where the rocks above are not favorably arranged for the detachment of spawls, and there are no trees to uproot, a quite different result from that here outlined ensues. In such cases the material brought down is the loose soil or gravel only, plowed up by the flying snow. The trees at the bottom, if there be any, are torn from their fastenings and scattered. But in their place the debris brought down is spread out, a soil is formed, the grass grows, and little parks and glades are made which are the camping grounds for the hunter.

After nine hours of continuous travel we reached one of the best of the slide clearings, where grass for the horses was most abundant. Descending from the trail to the bank of the creek, we bivouacked among the trees, where a cascade made merry music for us. A roaring fire soon cooked a supper that was eaten as only out-of-door hungry men can eat.

As early as possible the next day we were on the trail. Our course heretofore had been pretty nearly west. After a few miles the direction gradually changed toward the north, and a long and steep hill was reached. The hill climbed, the divide lay before us.

Here in a lovely, isolated valley are Twin Lakes, the first one the larger, the second one the prettier.

At this point one of the best examples of the effects of a slide is seen. A lot of debris and dead timber are spread out moraine fashion at the terminus of the slide. It is indeed a regular terminal moraine. As the geologist would say, it is of "recent geologic time," but whether ten, fifty, or a hundred years old, deponent saith not.

At the summit the trail swung around to the north. We soon crossed the boundary line into Idaho and began a long descent into the cañon valley of Moose Creek. We were now on the headwaters of the Clear-water River that flows into the Snake River and thence to the Columbia. The Lost Horse Creek also eventually reaches the Columbia, though by a very different channel, and starts in an exactly opposite direction.

In the Moose Creek Cañon there are snow-slide avenues and parks. At the edge of two of them in a tongue of timber, we made our permanent camp home. It is a spot Wright has often thus used, and where he has constructed many conveniences. Here also he had a cache of flour and bacon hanging in the trees. Our camp was thus in Idaho, while our hunting must be done across the range in Montana.

Our day's journey was ended about the middle of the afternoon. After eating a hearty dinner there was time to put up the tents and arrange our beds and camp before night. The day in these mountains is not a long one. The valley is narrow, the mountains high, and the sun rises late and goes to bed early. The evenings and mornings were cold, but a little hinged, rectangular camp stove that shut up when not in use, sang so lustily and threw out heat so grandly, that our 10 x 10 canvas house was as comfortable as a drawing-room. That evening around a blazing camp-fire we discussed the plans for the coming week.

Just below our camp on the opposite side of Moose Creek, a deep cañon led away into the range to the east. Below the mouth of the cañon and to its right was a small lake. From previous visits to this lake and the statements of others who had been up the cañon, Wright was certain that there were moose there. This cañon also ran up and across the range to where he knew there were white goats. About two miles down the stream there were licks frequented by elk and deer. It was decided that on the morrow we would beat up the cañon, cross the range and see what the chances were for goats.

The conversation then centered about this strange animal. Wright had hunted them time and again. He was a keen observer, as indeed one must be to hunt them successfully, and he related many facts regarding them, their habits, haunts, manner of hunting them, etc. For a long time we talked goat, and then went to bed perchance to dream of goats, certainly to rise in the morning and climb after them.

The white or Rocky Mountain goat is peculiar among animals. To the average man the superficial characteristics of the brute — size, general appearance, hair, motion, and the odor that emanates from it — are decidedly goaty. As a fact though, scientifically considered, it is *no goat at all*, but an *antelope*. Mr. F. W. True of the National Museum, Washington, D. C., has courteously furnished me the following memorandum:

As regards the classification of this animal, it is to be remarked in the first place that there is no "regular goat family." The goats belong to the *bovidæ*, or ox family. The antelopes also belong to this family, and, as often happens, the different sections of the family grade into each other, so that it is difficult to point out characters which will include all the members of one section and exclude all the members of the next most closely-related section. This is especially true in the ox family. Nevertheless,

the so-called "white goat," in the form, structure and color of its horns, is more like the typical antelope than the typical goats. Furthermore, there are other antelopes, such as the "goat antelopes" of Asia, which are closer to our "white goat" than the latter is to the true goats. The intervals on that side are shorter than on the side of the goats. Hence, in arranging the whole family, it seems more natural to place our species in the antelope section than in the goat section.

It would appear from this that the horns cut a *very* important figure in the case. Unquestionably the horns are like the antelope's, but it requires a good deal of imagination for the ordinary observer to trace the resemblance any further. The now accepted generic name of the goat in scientific terms, Dr. C. Hart Merriam informs me, is *Oreamnos montanus.* It has in times past received no less than thirteen distinct generic names.

The goat frequents northern latitudes. It has been reported as far south as Colorado, whether trustworthily I do not know. Dyche questions this fact. It is undoubtedly found in goodly numbers in Western Montana, Idaho, the Cascade Range, and British Columbia and Alaska. There has been a good deal of nonsense written about this animal. The stories that extraordinary precaution in hunting it must be taken are, as Fannin puts it in Shield's "Big Game of North America," "the veriest rot." His statement that "the mountain goat is, perhaps, the most stupid animal in the mountains," agrees with Wright's experience. The difficulty is *to get to him*, which simply means terribly hard and long climbing.

Wright insists that when once one understands them, they are the easiest game in the mountains to get, so far as wariness, stupidity, etc., go. He also states that the goat lives on the choicest of grasses, not moss. Horses will leave oats to feed on the same grass. In trailing goats in winter, he has found where they have pawed down through the snow four and five feet to reach this grass. In summer and fall they range on the north and east sides of the mountains. Early in the winter they work down to a lower altitude. When the snow fills the bottoms they climb back to their old heights and higher, but on the south side of the mountains where the snow does not lie. In summer and fall the goat hunts a shelf or crag that the sun strikes, and there warms himself until mid-afternoon; then he begins feeding. In winter he feeds nearly all day.

A striking peculiarity Wright has noted: The animal seldom, if ever, *looks upward.* It apprehends that all danger comes from below. If the hunter first climbs above it and cuts loose with the rifle, the chances are that the brute will climb nearer to him and closer to danger with each successive shot. This fact he has had peculiarly illustrated. On this point Dyche, in "Camp Fires of a Naturalist" (page 199), states that the anatomy of the goat prevents its raising its head above a line even with the shoulder, which explains the peculiarity. A plan that would work well, it seems to me, where those engaged in the hunt are good climbers, would be

to ascend the opposite side of the mountain from where the goats range. By thus getting above them unseen, one would have more chances in his favor. This presupposes that the goat range is known. A hunter who is a sure shot can, of course, creep on them from below and probably get his game. The difficulty with the ordinary hunter is his own poor eyesight and the keen vision of the goats. It requires a trained eye to detect them.

The mountain goat is found at an altitude ranging from 6,000 to 10,000 feet above sea-level. This, of course, depends upon latitude, the season, and the mountain range. While thus ranging in the higher parts of the mountains, he does not necessarily seek the topmost crags and summits. He selects a part of the mountain or range that meets his needs, and he will be found nowhere else in that immediate range.

The animal varies in weight from 100 to 250 pounds. It is stated by Baillie-Grohman that goats have been killed that weighed from 300 to 400 pounds. Such an animal is exceptional.

The flesh is not eatable. It is rank and apt to be tough, except in case of a kid, which can be eaten. Even the kid's meat is not to be hankered after. We met a trapper on Moose Creek who had wintered in the range the previous year. His provisions had run low and he killed a goat and ate of it, but wanted no more.

Back of the goat's horns are two sacs, or glands, which emit a most impregnate odor. Dyche asserts that these musk glands taint the body, making the otherwise palatable flesh unfit for food.

The goat has a peculiar hump between the shoulders that causes it to resemble the buffalo. Its ears are short and pointed, and probably of little practical account; the tail is also short; the hoofs are black and rather square and the outside rim sharp, giving it a firm foothold. The color of the animal is a yellowish white; the hair is long and brittle, and underneath, next to the skin and hidden by the hair, is a soft wool or fur. In hunting, the goat is not found to be particularly pugnacious.

Unfortunately, the next morning found me decidedly under the weather; so much so that it was useless to think of leaving camp.

After breakfast I was therefore reluctantly compelled to see Wright and the doctor set forth without me. During the day Heavilin set the camp to rights and I nursed myself.

Our camp, very pleasantly located, had an elevation of about 7,000 feet. For goat-stalking, no more favorable spot could have been found, unless one higher up in the range, which would have been much colder.

About the middle of the afternoon the hunters returned, and what a story they had to tell, and how played-out they were!

Upon reaching the moose grounds plenty of trails and signs were found. No moose were seen, however, and they climbed on after goats.

Heading the cañon, they crept along, gradually working higher. Crossing some slide rock the doctor stepped on a large boulder that tilted and threw him out of equilibrium. Under necessity, he sprang from the rock, dropping his Winchester, which fell in a hollowed rock, muzzle down. The moment it struck, the concussion discharged the cartridge in the chamber. With a roar that echoed around the cliffs it rebounded in the air ten or twelve feet, falling again on the point of the barrel, but not discharging another cartridge. The discharge splashed muddy water over Law and flattened the bullet like a pancake. Wright turned at the report, not having seen the preliminary seance, and beholding the doctor's face covered with mud, supposed him badly hurt. Luckily the only damage was a scarred rifle barrel.

A few minutes later they came to a tiny rill trickling from a snowbank, and threw themselves flat on their bellies and drank. As the doctor arose he looked up and — there, within fifty yards of him, was an old goat slowly getting to his feet. He had been lying down and the noise disturbed him. With the exclamation, "Wright, look there!" he turned his Winchester loose, but there was, of course, no cartridge in the chamber and the rifle only snapped. Seeing that he was liable to escape, Wright aimed carefully at his back and crippled him. By this time the doctor had also gotten in two shots at the animal. The long, white hair flew, and so, too, did the goat, and in an instant was out of sight around some rocks. Following his trail, they soon had him corralled in a little cañon. There, about fifteen feet away, stood the old patriarch at bay, his eyes blazing, mane awry, beard trembling, game to the last. Now was young Esculapius' opportunity, and he put a ball through grandpa goat's shoulder that wound up a long and rocky career. Wright pronounced him the largest goat he had ever seen. Leaving the carcass where it lay, they descended on the opposite side of the mountain and were thoroughly used up when camp was reached. The doctor came in, tired as he was, with majestic tread, walking almost on the air about him. He was as proud and happy as a father over his first-born, or a young Indian warrior after having taken his first scalp — and no wonder!

On the following day we three started for the goat pastures. This time a camera was taken along to photograph his goatship.

Crossing the little clearing we edged off into the timber. The ground was steep, the underbrush thick, the fallen timber lay in all directions. Before going far I saw that every fellow's muscles and staying powers were going to be tested to the uttermost. For several hundred feet there was no break in the hard climbing. As we worked around to the left to strike the cañon, the ascent moderated a bit, and the gloom of the trees was broken by breathing-spots of thick, yellow grass.

"So we toiled;
Now through the clustering groves
And now through openings, and anon between
The tall unbending columns that impale
The architectural forests."

The moose park, for such it was, was a beautiful clearing between the sides of the cañon, some 1,200 or 1,500 feet above our camp. I say clearing, yet there were large numbers of alder clumps scattered over it. At the edges of the timber these thickets were dense and of large extent. The park itself covered many acres. At every turn were evidences of the presence of these animals. Their beds were many, the trails led in all directions. At one place we came upon a large water-hole, still muddy from the recent rolling of one of these monarchs. And yet not one could be seen. Slowly we progressed through the jungle, stopping every few steps to listen and look for moose. But all in vain.

On such a climb as this, it is the first half that tells the hardest. It requires time for a man's legs to become disciplined, his lungs thoroughly inflated, and the heart accustomed to pumping rapidly and continuously. Halts, to blow, are necessary, even for the toughened mountaineer. I am bound to say that we did some mighty good climbing that day, and I have done enough of it to know.

Leaving the moose grounds we soon reached the slide rock. It extended over a wide area and the rocks made solid footing. We were climbing by a different route from the one Wright and the doctor had taken, after leaving the moose park. Away from the rocks, the ascent was so steep that we used roots, bushes, and grass tufts to assist in pulling ourselves upward.

At length we reached a point where our guide began to look for the goats. It was a wild, craggy spot at the summit. High above and beyond us swept the gray cliffs. Mounting on them rose pyramids, tufts, knobs of ragged rock, veritable watch-towers for the old goats. Perched on one of these dizzy crags, one of them might well bleat out:

"I am monarch of all I survey."

The walls above swept around in a semi-circle, inclosing a rocky country interspersed with mossy grass— but no moss— patches. Ledges of rock and stairways of boulders covered much of it. The cliffs appeared to be vertical, without break, but, as afterward disclosed, were weathered into coves, ledges, and goat runways.

Into the heart of this rockland, the goats' paradise, we must go.

"Still we climb.
The season and the summit passed alike,
High on the glacial slopes we plant our feet
Beneath the gray crags insurmountable."

IN THE BITTER ROOT RANGE.

1. THE TRACK OF A SNOWSLIDE. 2. UPPER TWIN LAKE.

1. HEAD OF MOUNTAIN SHEEP.
2. BROUGHT LOW AT LAST.
3. HOW HE STOPPED HIM.
4. HEAD OF ANTELOPE.
5. BLACK TAIL DEER CAMP.

We were tired. Slowly we made our weary way over the unequal rocks and grass patches. No attempt was made to disguise our presence. We talked, and our nailed shoes clinked over the rocks. Noise attracts rather than repels the stolid goat, and may lure him through curiosity to the fatal bullet, when otherwise he might not be discovered.

As we clambered over the boulders, Wright pointed out the distinction between a goat range and rocky heights where he will not be found. Those who think that the white goat is to be found among all high cliff regions in the mountains he inhabits, are wide of the mark.

The goat is a wise fellow. His habitat is a glorious one. It is not so easy to describe the peculiar character of it, but one sees it in an instant. It is an ideal range, full of the good things of life to the goat heart. High among the crags, where his vision ranges far and wide; with caves for shelter, narrow ledges on the cliffs affording means of retreat; pastures of a peculiar, juicy grass; rills of purest water; in regions of storm, cold, and snow, where fire seldom disturbs him, and man, to invade his sanctuary, must make the supremest exertions — here he lives, raises his young, fights his battles with his kind and dies.

As we admired this goat heaven, we also scanned the walls and rocks for the goats. Against the cold gray cliffs it was hard to distinguish their white bodies. Herein the goats had the advantage. Suddenly, with a quick glance over his shoulder, Wright cried out, "Great Scott! see those two goats standing there in that cave?" "Where! where!" "There! see? over against that wall — just over the top of yon large rock."

At length the doctor and I saw them, too. Sure enough, apparently asleep, in the warmth of the sun stood two goats, a nanny and kid, in a recess high up on the cliff-wall — but far away. Evidently we were not yet seen. Crouching down we hurriedly, but quietly, got ourselves under cover, and climbed 150 feet to a big rock bulwark above. Cautiously peering over it, we saw the goats still standing, but they were between 200 and 300 yards away. This was altogether too far for any but expert shots to hit them except by chance. It seemed as if nearer approach was impossible, because of their elevation and our lack of cover. If so we would either have to let them go or else blaze away and trust to luck.

We now crept around to the right side of our breastwork to see if any way of approach opened there. There was none. Moving back to our previous position, Wright startled us by, "Hurry up, they're off." Right he was. Either by sight or scent, they were aware of our presence, and, in their peculiar, bobbing, clumsy way, were making tracks along a cliff-trail for some rocks that would hide them. There was quiet no longer. Now that *they* had started, even if they were a long way off, we proposed to have the excitement of peppering them or the rocks around them.

Resting our rifles on the rock before us, a fusilade was begun that awoke the echoes. Crack, crack, crack-crack, went the three rifles, and the balls whizzed across the intervening space. The goats kept on at the same rate of speed, seemingly unconcerned. Shot after shot was pumped at them, the doctor emptying his magazine. The animals soon reached the shelter of the rocks. Only once did a shot seem to take effect. Then the old nanny stopped for an instant, as if a *new idea* had struck her.

We now separated. Wright climbed up to the level of the goats' trail; Law followed on a course lower down, and I took a route away below to cut off retreat to a cliff beyond where we last saw them. After going a short distance I came to a ledge not more than three or four inches wide. The rock above was rounded and smooth, with no projections to hold to. Below, it dropped twenty-five feet to a steep, bouldered slope that terminated in a precipice. The sun had not touched the spot, and the ledge was coated with thin ice. While searching for another passage a shot rang out above me. Then came a cry from Wright that the nanny was down and the kid on the run. In a moment he hove in sight, running along the face of the cliff. Before I could draw back to a wider place and drop into position, the kid had made headway, rounded a curve on the cliff, and was running in a straight line from me, giving only a stern shot at a long distance. I sent two balls after it, but neither seemed to hit, and it was soon out of sight. By dint of careful management, breaking the ice with my rifle and feet, I now worked over the ledge. At one place I had to push my rifle in advance on the rock above, and then inch by on tip-toe, hugging the scarp of the wall, face toward it, then draw the rifle after me. Emerging, I came to a little cañon or draw across which the kid had run. Somewhere up there its mother lay dead or dying among the rocks. The place was very steep; worse yet, was frozen and hard, with a veneering of fresh snow. It was a dangerous climb, for a slip meant a roll of from fifty to 500 feet over jagged rocks.

While studying it, Wright joined me, and we went up the gulch together. We found the dead goat on the rocks above the draw. Wright's shot had passed through the body, and one of the long-distance shots had struck its jaw. To get the animal down, it was necessary to attach a stout cord and one of us let it down to the other. Away from the rocks out on the frozen ground of the gulch, it was rather dangerous work. We had safely gotten it down quite a distance and Wright crawled back a few steps to reach for my rifle. He dislodged a rock that rolled, struck the carcass, and sent it tumbling down the rocks. Between 200 and 300 feet down it became wedged. As luck would have it, it was not damaged. We photographed and skinned it, and then climbed on to where the billy, killed the day before, lay. He was a monster. Three feet five inches

long, twenty-one inches deep, and thirty-nine inches high at the shoulder were his dimensions, and he probably weighed 225 or more pounds. After photographing him we peeled off his hide. In both cases head, horns, and hide were taken. The billy was tremendously thick-hided, and the hero of many fights. At one place on his rump his hide had once been ripped open by a rival, for several inches and to a considerable depth.

We now arranged our loads and started for camp. There were several hundred feet to climb to reach the divide. Within twenty feet of the top we struck a rather smooth, snow-dusted, frozen piece of ground. Wright had just scrambled up and disappeared on the other side. I halted a moment to select the easiest place, for it was very steep. I started on sideling up the slope and could hear the doctor climbing below me.

Without a thought of such a thing, and with no warning, my foot slipped and down I shot. The angle at which we were climbing caused my entire body (legs, belly, and outstretched arms) to touch the ground. I went rapidly over the slippery surface, but almost as soon as I could take in the situation found myself stopped within a few feet, by my foot striking an obstruction. Carefully turning my head I saw that the doctor was stretched at full length diagonally underneath me. His shoulder was resting against a large rock, his foot against a small stone that held him firmly. Against *his* foot mine had struck, and there I held. He quietly remarked, "We came pretty near going to kingdom come that time." It was the truth. Below us, within ten feet, there was a drop of thirty or forty feet, and just below that the abrupt slope fell in a precipice 200 or 300 feet high. I had scarcely noticed this fact as I came up. Had the doctor not been stoutly wedged as he was, the impact of my fall would have swept him over the cliff, and I would have followed. Wright, surmising that something had happened, reappeared while I was seeking a safe foothold to release myself. Taking our rifles first, he extended his hand, and grasping it, each in turn, we ran up the slope like goats.

What a descent confronted us! Three thousand feet of about as sheer a fall outside the perpendicular as mountains can show, lay there. Rocks, tussocks of slippery grass, fallen trees — that was what we saw. Before we struck the trail down in the cañon we had just missed breaking our legs and necks a half-dozen times.

We *were* tired when we got to camp, but — we had had what we came for — a goat hunt.

It is useless to disguise that goat-stalking is fearfully hard work. Anyone who cares for large-game hunting, however, will be willing to endure it *once*. Very few, even experienced hunters, will do much of it. Wright says he would never have gone the second time on his own account. For the once, even the tyro can afford the fatigue for the glory and excitement. It is seldom that a hunter is injured.

PUGET SOUND AND THE NORTH PACIFIC COAST.

FROM Tacoma and Seattle the traveler and tourist can make many pleasurable excursions. Some of these are by rail, some by steamer, some by a combination of the two, while others still are by stage, or with that as a factor, added to steamer and train.

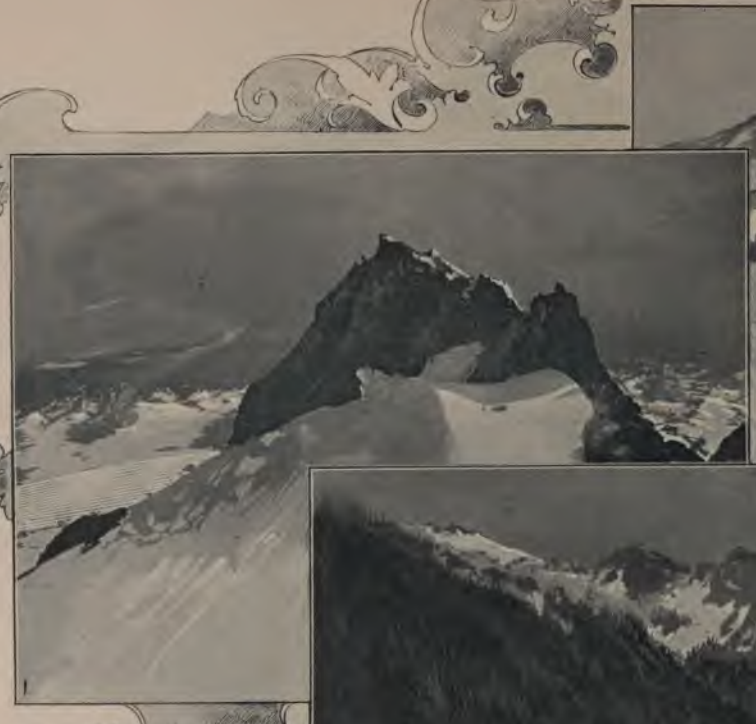
SNOQUALMIE FALLS.

A short, easy, and pleasant excursion is from Seattle to Snoqualmie Falls. One day is all that is necessary if the traveler so desires. Leaving Seattle in the morning via the Seattle, Lake Shore & Eastern Railway, the falls are reached about noon. Two hours can be utilized in wandering around the attractive spot and Seattle reached on the return early in the evening. The falls are higher than Niagara, though of very different character. They are much visited by tourists, and form a pleasant episode in a North Pacific Coast tour.

TO VICTORIA.

Some years ago a fine passenger steamer, by name City of Kingston, was plying the waters of Hudson River. When such a craft was desired, to run between Tacoma, Seattle and Victoria, this steamer caught some one's fancy and was purchased for the purpose. She made the voyage around Cape Horn in fine style, and has been making the round trip between Tacoma and Victoria once every twenty-four hours ever since. This gives a daylight ride the entire distance one way, and a good night's rest in the other direction. The steamer is a stanch one, almost elegant in its appointments. The state-rooms are large and commodious, and first-class in every respect. This trip is a very interesting one. The ride over the waters of the sound is pleasant in itself. The timbered shores with the many white lighthouses on the low points, the approaches to the cities, and finally the crossing of the strait of Juan de Fuca and the winding entrance to Victoria, all add to the interest of the voyage.

Yes, there is one thing more. We must not forget Mount Baker. If the day be clear, Mount Rainier, forty to fifty miles south from Tacoma, is visible for half the voyage. Then Mount Baker comes into view and continues with us to Victoria. Mount Baker is one of the giant snow-



1. CRATER ROCK, MOUNT HOOD.

2. FOOT OF NESQUALLY GLACIER AND EAGLE PEAK, MOUNT RAINIER.

3. MOUNT RAINIER FROM PARADISE PARK.

capped, glacier-covered peaks of the coast. It rises high above everything else in its vicinage, as if the Almighty placed it as a beacon for the mariner far out on the Pacific, to safely make the shelter of the sound. Baker, while not as well known a peak as either Rainier or Hood, is far more difficult to climb than either, and has seldom been scaled.

After leaving Port Townsend the steamer crosses the broad strait of Juan de Fuca. Here the wind comes whistling in from the mighty Pacific itself. As we rode over its green waters the sun sank into the ocean's arms, leaving a golden-red effulgence to mark its burial.

Victoria is a different sort of a city from the sound cities south of it. It is very interesting in its rather narrow, peculiarly arranged streets. Its hotels are good and its public and business buildings, of brick and stone, are substantial structures. A walk about its streets, while the steamer remains at the wharf, will well repay the intelligent traveler.

MOUNT RAINIER.

A most unusual trip, and, at the same time, one full of pleasure and instruction, is a trip from Tacoma to this grand peak. If the tourist has seen it from Tacoma, Seattle, or the sound, he can but be overpoweringly impressed with it, as was Theodore Winthrop when first he saw it in 1853. One is almost tempted to believe that it was placed there to be worshiped. At least we can, after having seen it in all its magnificent proportions, well understand how simple and untutored folk can be object worshipers. Since having stood upon the crown of this august monarch, I feel an intimacy with it, a sort of proprietorship in it. It seems as though, when standing at Tacoma and gazing at it, I could stretch out a hand and that it would be gripped by one in return.

There are two trips that can be made to the mountain — one by railroad to Wilkeson, then afoot up the Carbon River and Glacier to Crater Lake and the northern side of the peak. The north side of the mountain can not be climbed. The other route is by stage or private conveyance, around the western and southern base of the mountain to Longmire's Springs. Thence a good trail leads up the Nesqually and Paradise rivers to Paradise Park. From this lovely spot any number of interesting excursions may be made. The mountain is climbed from here, but it is not at all necessary to a summer's enjoyment that this be done. The study of the great glaciers, or the botany and geology of the mountain, can be made without climbing the peak. This latter attempt is one requiring great endurance and nerve. It should *on no account* be undertaken by a novice or one unused to alpine climbing, without first consulting a physician and having the lungs and heart examined. The ascent of the peak requires a good guide and two days' time. One night must be

spent on the ice, snow and rocks, at about 11,000 feet above sea-level. For those who can accomplish the feat, it is well worth the effort.

In 1895 a tent hotel was located in Paradise Park. Unless such an arrangement is continued, the mountaineer must camp out, supplying his own "grub," camp outfit, bedding, tent, etc. As the number of visitors is steadily increasing, it is to be presumed that the hotel arrangement noted will be retained, even with improvements.

Many ascents have now been made of Rainier, the first one having been in July, 1857, by Lieutenant — afterward General — Kautz, recently deceased. There is not such another mountain in this country to climb, and that *can be climbed.* The ascent of Mount Baker is perhaps more difficult at the present time, but it is nearly 4,000 feet lower in altitude than Rainier, which is 14,444 feet high. Both mountains are covered with glaciers, as indeed are Hood (11,225 feet), Adams (12,250), St. Helens (9,750), and Shasta (14,350 feet high).

GRAY'S HARBOR, WILLAPA BAY, AND ASTORIA.

One of the most novel and varied tours of this region can be made, either from Tacoma to Portland or vice versa, through the country between the main line of the Northern Pacific Road and the Pacific Ocean. It requires two and one-half days' time, and is so filled with interesting sights and experiences that the wonder is more do not take it.

Leaving Tacoma, either via Olympia or Centralia, Ocosta, on Gray's Harbor, is reached in the evening, and the night passed there. At the breaking of the morn we look out over a wide expanse of water — Gray's Harbor. We can dimly discern the farther — northern — shore, and can see well out toward the bar the wraith of a vessel making its way toward the broad bosom of the Pacific, which we can not see. If we can not see it we can hear the loud roar of the surf, deep-toned and steady, varying only as the wind rises and falls. Between us and the ocean lies the South Bay and a narrow sand spit, and from the farther side of this comes the booming sound that betokens the presence of the wide, wide ocean.

Centering about the year 1790 there was great activity in northwestern exploration. The "noble science of discovery" — *a la* Vancouver — was what might be termed a national fad at that time. The Spaniard, the Briton, the American, the Frenchman, were all afflicted. Particularly was there "pernicious activity" (?) on the part of the lion of England and the eagle of the United States.

It may be said that, all in all, the Yankee came out ahead. The principal figures in this international drama were Capt. George Vancouver of the British navy, and Capt. Robert Gray, a plain Boston skipper.

In April, 1792, Vancouver and Gray are both upon the coast. Van-

couver sails in through the Strait of Juan de Fuca — *not San* Juan de Fuca, as given by many — and thoroughly explores and names pretty much everything connected with the Puget Sound region.

At the same time Gray is operating on the coast lower down and, in "latitude 46° 10′ north," thinks he has discovered a large river. Speaking Vancouver's ship he acquaints him with his supposed discovery. Vancouver, disbelieving it, sails away northward, and Gray pushes southward again to re-examine his unexplored river. On May 7, 1792, within six miles of land, he saw from his masthead a passage between two sand-bars into apparently a fair harbor. Standing in he came to anchor in a protected harbor, to which he gave the name Bluefinch Harbor. This was in honor of one of the owners of his ship, the now noted Columbia.

This name was afterward displaced, and to the large bay was given the name of Gray's Harbor — the lovely sheet of water we are even now looking upon, and named for the discoverer himself.

Remaining there a few days, Gray sailed southward, and on the 11th of May, 1792, sailed across the bar of the great river he had indeed discovered, and gave to it the name of his ship — Columbia.

As we stand on the shores of the bay, hear the boom of the breakers, and look back upon the wooded hills, we try to imagine what it was 100 years ago. When Gray anchored here his vessel was soon surrounded by Indians in their canoes. These have been supplanted by the pale face, with his sawmills and four-masted sailing vessels and steamers.

But enough of history for the time being. We have ahead of us a ride unique, charming, and let us be off.

A so-called stage draws up. It is a comfortable wagon with seats running lengthwise, as in a street car, and wide-tired wheels. Jumping in we are soon wheeling along the beach and through patches of forest, on the east side of South Bay. Two miles are behind us and the vehicle turns toward the water, and through an opening is revealed a long pile bridge to Laidlaw's Island. Across this we ride, passing in mid-stream a large dismantled sawmill built on piles and with no direct land connection. Laidlaw's Island, a pleasant wooded spot, is passed and a sandy ridge lies before us. For miles we can see it, and it looks as if a century's storms had indeed been wrestling with it. The sand has been piled in a huge ridge of dunes, out of which project jagged ends of tree-stumps and trunks, bleached and polished by the sands, waves, and winds. As the stage pulls through the heavy sand to the top of the ridge, the grand old ocean bursts upon the sight. For mile upon mile we can see the waters rolling in upon the level beach. Far out the waves come pouring in, tier upon tier, terrace after terrace, wall after wall. It is interesting to watch a wave-line and mark the many changes it undergoes before

it flows quietly at our feet, powerless and impotent. Masses of foam, walls of advancing water, combing waves, cascades, boiling caldrons — these and other forms it assumes as it rushes madly along. Now a big line comes bowling in, a solid wall many feet high. Nothing can stand before it, apparently, when lo! becoming overbalanced, it topples, breaks, and melts away, the foam dashing high in air. It gathers itself together again, but its glory has passed. We count the different waves rolling toward us — from nine to thirteen we can see reaching out a mile or more from shore.

The sand of the ridge is grayish-white, lined with debris. The beach at the water's edge is brown, being moist. How hard it is, and dotted with white shells and sea biscuit! And along this grand highway, better than asphalt, so hard and smooth that the wheels scarce leave a track, we ride for eleven miles. And ever the great waves come curling in; and ever the spray breaks away, leaping joyously into the air; and ever the deep roar of the breakers furnishes a sort of sepulchral, dirge-like music, as the horses trot along. Had we but time we could gather thousands of shells. As it is we drop now and then from the rear step, stoop and grab a shell, then hasten on the dead run after the flying vehicle. A covey of snipe run swiftly about at the water's edge, and afar out the mists from the breaking waves are whipped about by the wind.

What a different experience from railroad trains, steamboats, climbing mountains, sight-seeing in cities! We appreciate the refreshing contrast and enjoy the salt air as it blows about us.

Leaving the beach we ride through shady groves and parks. We pass through the Shoalwater Indian Reservation. By the roadside is their burying ground. The graves are inclosed in neat fenced squares. Small houses, not unlike dog kennels, cover them. Near Tokeville an artesian well 175 feet deep is fenced in and the gate is an oval archway formed by the two long, tusk-like bones from a whale's jaws. Every two or three years a whale is cast upon the beach, and relics are found at many points.

At Toke's Point the stage is exchanged for a stanch little steamer, and after a couple of hours' delightful ride we reach South Bend.

South Bend is picturesquely situated near the mouth of Willapa River. It is the terminus of a branch line of the Northern Pacific. It is in a timber region, and sawmills and salmon-canning factories are found here.

In the morning we again take the steamer and enjoy a ride over Willapa Bay to Sealand, reached at noon.

We are in an oyster and clam region. The oysters are the small Pacific Coast oyster. It takes a great many of them to make a plateful, but they are delicious eating. They are shipped in sacks, each sack containing more than 2,500. Several small towns on Willapa Harbor are

1. CAPE HORN OF THE COLUMBIA. 2. SALMON FISHING. 3. PALISADES OF THE COLUMBIA.
4. CASCADES OF THE COLUMBIA.

ALASKAN SCENES

1. FACE OF MUIR GLACIER. 2 INDIAN RIVER BRIDGE. 3. GLACIER BAY.
4. TOTEM POLES. 5. MUIR GLACIER.

on a little matter of domestic economy, to take in a supply of ice for the ship. The bay is full of fragments of the mighty glacier that glistens miles away at the end of the fiord. Within a few miles of the Queen there is enough of floating ice to supply the British navy. Look how the sailors fish for it! They catch the berg in a net, but the net must be large and strong. It is made of the stoutest cordage, and when it is cast into the sea, with the skill of fishermen they draw it around some ice floe, which in an instant is hauled up, as they would haul in a monster fish. * * * * It was a novel experience to feed on icebergs; to have a glacier as an attachment to our culinary department, serving us with a necessity of our daily food, not by the pound, but by the ton."

Sessions thus writes of Lynn Canal: "And grander and more enchanting than ever, the scenery opens up to our view as we sail through Lynn Canal, with its bold, white mountains on the west, and on the eastern shows the great Continental Range, which fronts abruptly on the water. We pass peak after peak, and at every point we are surprised at another and still another glacier; until nineteen glaciers in all are passed, when we reach the head of the canal."

It will be seen that while glaciers are the one particular feature of the Alaskan trip, that there is much beside to entertain the tourist. The winding waterway is studded with beautiful and countless isles. Mountains are piled on mountains on the mainland. Indian villages of a quaint civilization nestle in the fiords and inlets.

Among the many glaciers, the Patterson, Auk, Eagle, the great Davidson Glacier, the Taku, Rainbow, and Muir are the most important. Of all these the Muir is the king. It is of immense size, and discharges annually an enormous quantity of ice into the sea. The glacier is climbable and the Queen steams close to it, and those who desire are taken to shore in small boats, and climb up and over the glacier. It is necessary to be watchful and careful in doing this, however. The front is continually breaking off and dropping into the water. To quote Doctor Field again: "It was a moment of intense excitement when some peak was seen to waver. At first its base seemed to be crushed and crumbled, and came down like a snow-slide, and then there was a flash of something bright, as the ice caught the rays of the sun, followed by a muffled sound, and a mass of foam and spray thrown into the air.

"To see the Muir Glacier is an event in one's life, like seeing St. Peter's at Rome, or the Taj in India. It is a sight which does not fade in the distance. Go where he may, still is he

'By the vision splendid
On his way attended,'

Till his eyes close on all things earthly, and open on the purer light of heaven."

Northern Pacific Railroad.

Rates and Arrangements for the Tourist Season.

MINNESOTA SUMMER RESORTS.— During the summer season the Northern Pacific Railroad will sell round-trip excursion tickets from St. Paul or Minneapolis to Glenwood (Lake Minnewaska) at $5.25; Battle Lake, $7.50; Fergus Falls, $7.50; Perham, $7.75; Detroit Lake, $9.15; Minnewaukan (Devil's Lake), $18.65; Winnipeg, $22.50. From Duluth to Deerwood, $3.80; Battle Lake, $7.50; Fergus Falls, $7.50; Perham, $7.75; Detroit Lake, $9.15; Minnewaukan, $18.65; Winnipeg, $22.50. From Ashland, Wis., to Battle Lake, $9.00; Fergus Falls, $9.00; Perham, $9.25; Detroit Lake, $10.65; Minnewaukan, $20.15; Winnipeg, $22.50. Good going to Minnesota resorts one day (from Ashland two days), to Minnewaukan (Devil's Lake) and Winnipeg two days from date of sale. Good to return on or before October 31st.

YELLOWSTONE PARK RATES.— The Northern Pacific Railroad will sell round-trip excursion tickets from May 29th to September 28th (both dates inclusive) at the following rates:

A $47.50 round-trip ticket, St. Paul, Minneapolis, or Duluth to Livingston, or Mammoth Hot Springs and return, returning same route, or via Billings to the Missouri River.

A $5 ticket, Livingston to Mammoth Hot Springs Hotel and return, including rail and stage transportation.

A $49.50 ticket, Livingston to Cinnabar and return, Cinnabar to Mammoth Hot Springs, Norris, Lower and Upper Geyser basins, Yellowstone Lake, Grand Cañon, and Falls of the Yellowstone and return, including rail and stage transportation, and five and one-half days' accommodations at the Association hotels.

The $5 and $49.50 tickets on sale at eastern and western termini between dates first named above, at Livingston May 31st to September 30th, both dates inclusive, are good if used in the Park any time between June 1st and October 6th, both dates inclusive, and do not require identification of purchaser.

By payment of $22 at Mammoth Hot Springs Hotel, to the cashier of the Yellowstone Park Association, and of $22.50 to the manager of the Yellowstone National Park Transportation Company, having his office in this hotel, tourists not provided with regular Park tickets can secure transportation and hotel accommodations for the regular five and one-half days' tour.

The hotel service in the Park is now very complete. Tourists can stop at any of the principal points of interest with the assurance that comfortable accommodations will be supplied them.

MONTANA AND EASTERN WASHINGTON POINTS.— The Northern Pacific Railroad has on sale, at greatly reduced rates, round-trip excursion tickets from St. Paul, Minneapolis, or Duluth to Billings, Springdale, Livingston, and Bozeman,

Mont.; Helena and Butte, Mont. (choice of routes returning, via Northern Pacific or Great Northern Railway lines); Missoula, Mont.; Spokane, Wash. (choice of routes returning, via Oregon Railway & Navigation Company and its connections, or via the Great Northern, or Northern Pacific lines); Medical Lake, Pasco, Kennewick, and Toppenish, Wash.; Nelson and Kaslo, B. C.; and Coulee City, North Yakima, and Ellensburg, Wash.

These tickets are of iron-clad signature form; require identification of purchaser at return starting point.

Any of the above tickets may read to return via Billings to the Missouri River.

NORTH PACIFIC COAST EXCURSIONS.— A $90 round-trip individual excursion ticket, St. Paul, Minneapolis, or Duluth to Tacoma, Portland, Seattle, New Whatcom, Vancouver, or Victoria, is on sale daily at points first named and by eastern lines.

Tacoma, Seattle, New Whatcom, Victoria, Vancouver, or Portland tickets, at above rates, will be issued, going via Northern Pacific, returning via same route, or Great Northern, or Soo-Pacific to St. Paul, Minneapolis, or Duluth; or via Canadian Pacific to Winnipeg or Port Arthur; or via Billings to the Missouri River; Portland tickets will also be issued, returning via Oregon Railway & Navigation Company and its connections to either Omaha or Kansas City, or to St. Paul via Sioux City.

CONDITIONS. — Above tickets limited to nine months from date of sale, good, going trip, sixty days to any one of North Pacific Coast termini named, returning any time within final limit.

ALASKA EXCURSIONS.— An excursion ticket will be sold from eastern termini named to Sitka, Alaska, at $170, which rate includes meals and berth on the steamer. Tickets on sale May 1st to September 30th. Limit nine months. Going to Tacoma, sixty days, returning within final limit, holder to leave Sitka on or before October 31st. Tickets will be issued to return either via the Northern Pacific, Soo-Pacific, or Great Northern lines to St. Paul or Minneapolis, or via Canadian Pacific Railway to Winnipeg or Port Arthur. Usual stop-over privileges granted. Steamer accommodations can be secured in advance by application to any of the agents named below. Diagrams of steamers at office of General Passenger Agent at St. Paul.

"TO THE WESTWARD."—The Alaska Commercial Company's steamer Dora will sail from Sitka to Unalaska, in Bering Sea, 1,300 miles distant, on or about the eighth of April, May, June, July, August, September, and October, stopping at Yakukat, Prince William's Sound, Cook's Inlet, Kodiak, Karluk, and Unga. Close connection is made with Pacific Coast Steamship Company's vessel "City of Topeka" at Sitka. The steamer Dora has accommodations for twenty-two cabin passengers. Round trip is made in from twenty-five to thirty days, three days of which time are spent at Unalaska. Round trip from Sitka, including berth and meals on boat, $120. (There is also steerage rate of $80 for round trip, there being accommodations for thirty-five passengers.)

CALIFORNIA EXCURSION RATES.— The Northern Pacific Railroad will sell round-trip excursion tickets from St. Paul, Minneapolis, or Duluth as follows:

To San Francisco, going via the Northern Pacific, Seattle, and steamer, or Portland and the Shasta Route, or the ocean to San Francisco; returning via rail or steamer to Portland, or via steamer to Seattle, and the Northern Pacific, Great Northern, or Soo-Pacific lines to St. Paul or Minneapolis; or via Canadian Pacific to Winnipeg or Port Arthur; or via Billings to the Missouri River; or via rail or steamer, Portland and Huntington to the Missouri River; or returning by the southern lines to Council Bluffs, Omaha, Kansas City, Mineola, or Houston, at $103.50; to New Orleans or St. Louis, at $109.50.

To Los Angeles, going via Portland and Shasta Route, and returning via rail, Portland and the Northern Pacific, Great Northern, or Soo-Pacific lines to St. Paul or

Minneapolis; or via Billings or Huntington to the Missouri River, at $122.50; or going via Portland and Shasta Route and returning via San Francisco and Ogden to Council Bluffs, Omaha, or Kansas City, at $113; to St. Louis, at $119.

To San Diego, going via Portland and rail through Los Angeles, and returning via rail, Portland and the Northern Pacific, Great Northern, or Soo-Pacific lines to St. Paul or Minneapolis; or via Canadian Pacific to Winnipeg or Port Arthur; or via Billings or Huntington to the Missouri River, at $129; or going via Portland and Shasta Route and returning via San Francisco and Ogden to Council Bluffs, Omaha, or Kansas City, at $119.50; to St. Louis at $125.50.

Tickets via ocean include meals and berth on steamer.

At the eastern termini of the southern transcontinental lines excursion tickets will be sold, or orders exchanged, for tickets to San Francisco, returning via either the Shasta Route, the all-rail line to Portland, or the ocean and the Northern Pacific to St. Paul, Minneapolis, or Duluth, at a rate $13.50 higher than the current excursion rate in effect between Missouri River points, Mineola or Houston and San Francisco. The steamship coupon includes first-class cabin passage and meals between San Francisco and Portland.

Return coupons reading from Missouri River points to Chicago or St. Louis will be honored from St. Paul or Minneapolis, either free, or with a small additional charge, according to route.

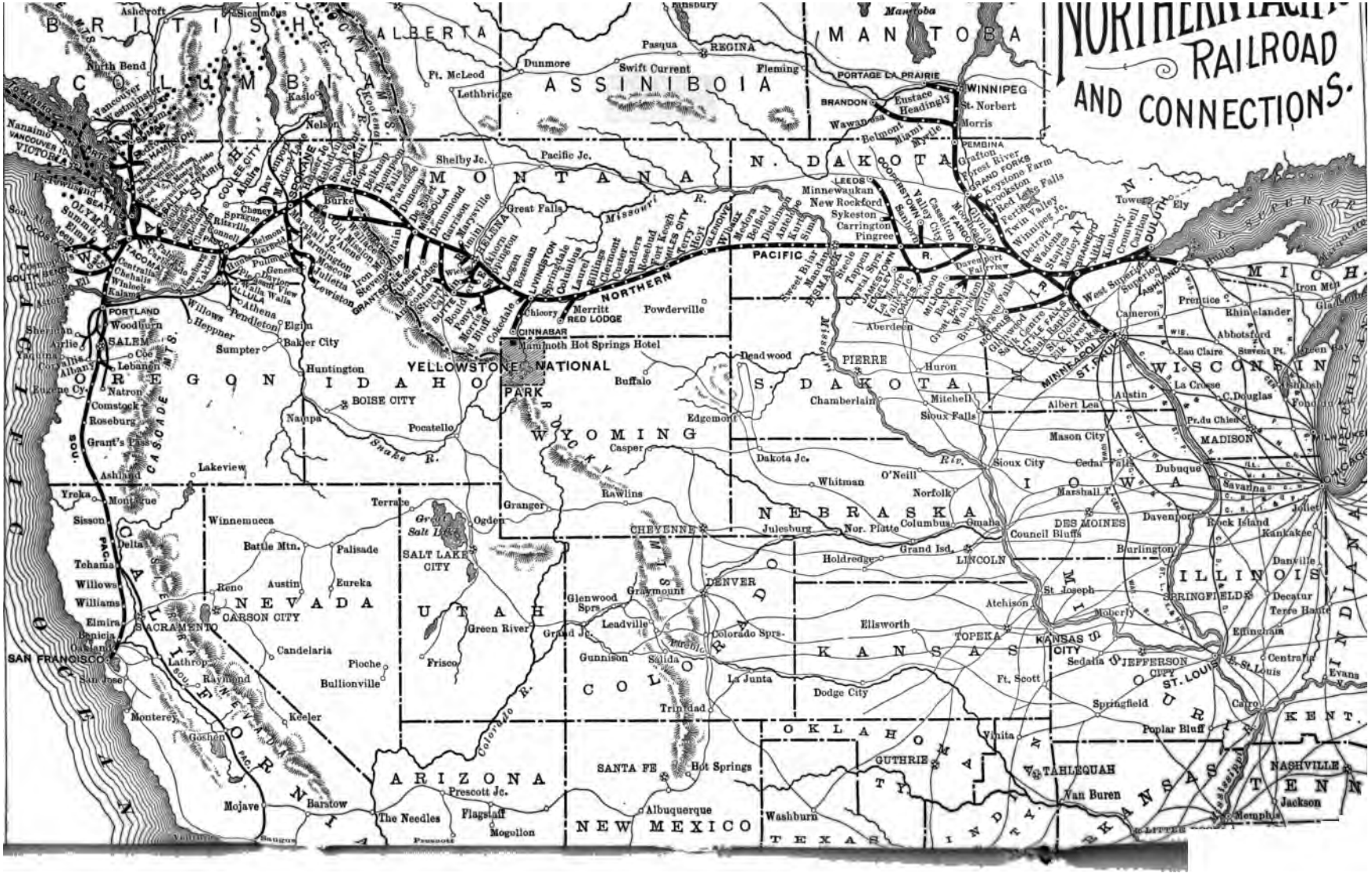
These excursion tickets allow nine months' time for the round trip; sixty days allowed for west-bound trip up to first Pacific Coast common point; return any time within final limit.

General and Special Agents.

F. H. FOGARTY, General Agent, 210 South Clark Street, Chicago, Ill.
R. A. EVA, General Agent, Duluth, Minn.
F. C. JACKSON, Assistant General Agent, West Superior, Wis.
H. SWINFORD, General Agent, Depot Building, Water Street, Winnipeg, Manitoba.
A. D. EDGAR, General Agent, Corner Main and Grand Streets, Helena, Mont.
W. M. TUOHY, General Agent, 23 East Broadway, Butte, Montana.
F. D. GIBBS, General Agent, Spokane, Wash.
A. TINLING, General Agent, 925 Pacific Avenue, Tacoma, Wash.
I. A. NADEAU, General Agent, Seattle, Wash.
T. K. STATELER, Gen'l Agent Pass'r Department, 638 Market St., San Francisco, Cal.
A. D. CHARLTON, Assistant General Passenger Agent, Portland, Ore.
B. N. AUSTIN, Assistant General Passenger Agent, St. Paul, Minn.
A. L. CRAIG, Assistant General Ticket Agent, St. Paul, Minn.
CHAS. S. FEE, General Passenger and Ticket Agent, St. Paul, Minn.
J. M. HANNAFORD, General Traffic Manager, St. Paul, Minn.

District Passenger Agents.

F. A. GROSS, 15 State Street, Boston, Mass.
W. F. MERSHON, 319 Broadway, New York City.
J. H. ROGERS, JR., 47 South Third Street, Philadelphia, Pa.
L. L. BILLINGSLEA, 47 South Third Street, Philadelphia, Pa.
CHAS. E. JOHNSON, 817 Carnegie Building, Pittsburg, Pa.
WM. G. MASON, 44 Exchange Street, Buffalo, N. Y.
THOS. HENRY, 128 St. James Street, Montreal, Que.
W. H. WHITAKER, 153 Jefferson Avenue, Detroit, Mich.
JNO. E. TURNER, 42 Jackson Place, Indianapolis, Ind.
C. G. LEMMON, 210 South Clark Street, Chicago, Ill.
J. N. ROBINSON, 99 Wisconsin Street, Milwaukee, Wis.
P. H. NOEL, Sixth and Olive Streets, St. Louis, Mo.
J. J. FERRY, 32 Carew Building, Cincinnati, Ohio.
O. VANDERBILT, 503 West Locust Street, Des Moines, Iowa.
GEO. W. McCASKEY, Butte, Mont.
GEO. D. ROGERS, St. Paul, Minn.
F. O'NEILL, 255 Morrison Street, Portland, Ore.
E. L. RAYBURN, Traveling Passenger Agent, 255 Morrison Street, Portland, Ore.


NORTHERN PACIFIC RAILROAD AND CONNECTIONS.
BRITISH COLUMBIA
ALBERTA
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MONTANA
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S. DAKOTA
MINNESOTA
WISCONSIN
MICH.
IOWA
NEBRASKA
WYOMING
IDAHO
OREGON
NEVADA
UTAH
COLORADO
KANSAS
OKLAHOMA
ARIZONA
NEW MEXICO
TEXAS
ILLINOIS
INDIANA
KENT.
TENN.
YELLOWSTONE NATIONAL PARK
Mammoth Hot Springs Hotel
CINNABAR
RED LODGE
Merritt
Chicory
Powderville
Great Falls
Shelby Jc.
Pacific Jc.
Missoula
Spokane
Seattle
Tacoma
Portland
Salem
Eugene Cy.
Roseburg
Grant's Pass
Ashland
Lakeview
Pendleton
Walla Walla
Lewiston
Baker City
Huntington
Boise City
Nampa
Pocatello
Shoshone Falls
Snake R.
Casper
Buffalo
Deadwood
Aberdeen
Pierre
Huron
Mitchell
Chamberlain
Sioux Falls
Sioux City
Dakota Jc.
Edgemont
Whitman
O'Neill
Norfolk
Rawlins
Julesburg
Nor. Platte
Columbus
Omaha
Council Bluffs
Grand Isd.
Holdredge
Cheyenne
Denver
Colorado Springs
Pueblo
Leadville
Glenwood Spgs.
Grand Jc.
Gunnison
Salida
La Junta
Trinidad
Dodge City
Ellsworth
Atchison
St. Joseph
Topeka
Kansas City
Sedalia
Jefferson City
St. Louis
Ft. Scott
Springfield
Poplar Bluff
Cairo
Evansville
Terre Haute
Danville
Decatur
Springfield
Rock Island
Davenport
Dubuque
Burlington
Lincoln
Des Moines
Madison
Milwaukee
Chicago
Green Bay
Marshfield
Eau Claire
Stevens Pt.
Rhinelander
Prentice
Ashland
Superior
Duluth
Grand Forks
Fargo
Winnipeg
Portage La Prairie
Brandon
Regina
Swift Current
Moose Jaw
Medicine Hat
Calgary
Edmonton
Vancouver
Victoria
New Westminster
Seattle
Tacoma
Portland
San Francisco
Oakland
Sacramento
Carson City
Reno
Winnemucca
Ogden
Salt Lake City
Green River
Grand Jct.
Frisco
Bullionville
Candelaria
Pioche
Keeler
Monterey
Goshen
Lathrop
Raymond
San Jose
Mojave
Barstow
Needles
Prescott Jc.
Flagstaff
Mogollon
Albuquerque
Santa Fe
Hot Springs
Guthrie
Tahlequah
Van Buren
Fort Smith
Little Rock
Memphis
Nashville
Jackson
Cairo
Evansville
Indianapolis
Chicago
Milwaukee
Green Bay
Duluth
Superior
Ashland
Minneapolis
St. Paul
Winona
La Crosse
Madison
Milwaukee
Chicago
Rock Island
Peoria
Springfield
St. Louis
Kansas City
Omaha
Sioux City
Sioux Falls
Aberdeen
Bismarck
Mandan
Dickinson
Glendive
Miles City
Billings
Livingston
Bozeman
Helena
Butte
Missoula
Spokane
Seattle
Tacoma
Portland
Salem
Eugene Cy.
Roseburg
Grant's Pass
Ashland
Lakeview
Pendleton
Walla Walla
Lewiston
Baker City
Huntington
Boise City
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Shoshone Falls
Snake R.
Casper
Buffalo
Deadwood
Aberdeen
Pierre
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Stevens Pt.
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